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# ENVIRONMENTAL ASSESSMENT BOARD

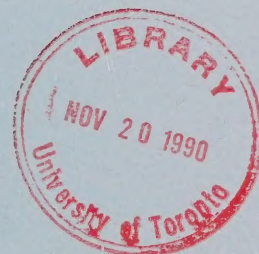
VOLUME: 256

DATE: Tuesday, November 6, 1990

BEFORE:

A. KOVEN Chairman

E. MARTEL Member



FOR HEARING UPDATES CALL (TOLL-FREE): 1-800-387-8810

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Ontario

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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL  
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR  
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental  
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental  
Assessment for Timber Management on Crown  
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council  
(O.C. 2449/87) authorizing the  
Environmental Assessment Board to  
administer a funding program, in  
connection with the environmental  
assessment hearing with respect to the  
Timber Management Class  
Environmental Assessment, and to  
distribute funds to qualified  
participants.

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Hearing held at the offices of the Ontario  
Highway Transport Board, Britannica Building,  
151 Bloor Street West, 10th Floor, Toronto,  
Ontario, on Tuesday, November 6th, 1990,  
commencing at 9:00 a.m.

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VOLUME 256

BEFORE:

MRS. ANNE KOVEN  
MR. ELIE MARTEL

Chairman  
Member



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I N D E X   O F   P R O C E E D I N G S

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<u>GEORGE MAREK</u> , Resumed	45966
Continued Direct Examination by Ms. Swenarchuk	45966



I N D E X   O F   E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
1522	Hand-drawn diagram by Mr. Marek depicting location of plantation within a total landscape.	46046
1523	Hand-drawn diagram prepared by Mr. Marek depicting poplar establishment by seeding and root suckering.	46046
1524	Nine-page article entitled: The Prediction of Understorey Revegetation by Environmental Factors for the Purpose of Site Classification in Forestry: An Example from Northern Ontario Using Residual Ordination Analysis, published in Canadian Journal of Forest Research, Volume 15, 1985, authored by Carleton, Jones and Pierpoint.	46048
1525	Eight-page article entitled: The Vegetation of Post-logged Black Spruce Lowlands in Central Canada, Part I, Trees and Tall Shrubs, published in Canadian Journal of Forest Research, Volume 18, 1988, authored by Brumelis and Carleton.	46048
1526	18-page article entitled: Vegetation of Post-logged Black Spruce Lowlands in Central Canada, Part II, Understorey Vegetation, published in Journal of Applied Ecology, 1989, Volume 26, authored by Brumelis and Carleton.	46049





Index of Exhibits (Cont'd)

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
1527	24-page article entitled: A Simple Forest Succession Model and its Application to the Boreal Forest of Central Canada, authored by McLelland and Carleton.	46050
1416A	FFT draft terms and conditions revised silvicultural prescriptions, dated November 6, 1990.	46082
1528	Beardmore/Lake Nipigon Watchdog Society witness statement entitled: The Lake Nipigon Watershed, Its Forests and Environs.	46133
1529	Source book for Beardmore/Lake Nipigon Watchdog Society witness statement.	46133
1530	Copy of letter dated October 15, 1990 from Watchdog Society signed by Edgar Lavoie and Paul Odorizzi to Mr. Quenton Day of MNR.	46134





1 ---Upon commencing at 9:00 a.m.

2 MADAM CHAIR: Good morning. Please be  
3 seated.

4 GEORGE MAREK, Resumed

5 MS. SWENARCHUK: I am just going to review  
6 a couple of the slides from yesterday, Madam Chair, Mr.  
7 Martel. You have the photographs; do you?

8 MADAM CHAIR: Yes.

9 CONTINUED DIRECT EXAMINATION BY MS. SWENARCHUK:

10 Q. First is slide 147 which was a  
11 budworm infested tree. Okay. Can you just explain,  
12 Mr. Marek -- first of all, do you recall when this site  
13 was harvested?

14 A. This slide represent a balsam tree  
15 which is a product of "natural regeneration" in a  
16 cut-over; in other words, no silviculture treatment was  
17 done after cutting and the advanced growth of balsam  
18 was left on the site, and you can see the results of  
19 budworm effect.

20 The tree is dead long time ago, quite a  
21 fungi already are growing on the tree, this is that  
22 white stuff around the tree branches, and it's a  
23 typical case of a condition on these old cut-overs  
24 where no treatment was done. The advanced growth, of  
25 course, of balsam got established and reach a stage as

1 represented here.

2 Q. Now, is that what you would describe  
3 as a large area clearcut?

4 A. Yes, very much so. This is the area  
5 which is several thousand hectares and represent the  
6 original -- or represented long time ago the original  
7 fire originated stands of black spruce.

8 Q. And was that done by tree-length  
9 harvest?

10 A. This was done by tree-length harvest,  
11 the conventional 8-foot strip cutting as it was done in  
12 50s and 60s.

13 Q. Okay. Now, I want to ask you about  
14 slide 111, which is this one which shows -- well, I'll  
15 let you describe what it shows.

16 A. This area has been cut, conventional  
17 harvesting, I think it was also 8-foot or 16-foot  
18 perhaps. It was done in a strip cutting manner in  
19 block 5 and 51 and the detail -- I think was 1957, and  
20 the tree of course -- natural established tree after  
21 site preparation got established on the places or  
22 microsites which is pretty difficult to -- was pretty  
23 difficult to visualize that artificial planted tree  
24 would survive and grow as well.

25 Q. Now, was that a conventional tree

1 length harvest as well?

2 A. That's a conventional harvesting  
3 where the slash, including the foliage, was left on the  
4 site for decomposition.

5 Q. Now, if that site had been harvested  
6 with a full-tree harvest method, Mr. Marek, and the  
7 slash removed, how in your view would that have  
8 affected regeneration on the site?

9 A. Now, the whole recovery of the site  
10 by the input of additional nutrients, by slash or  
11 needles, also very much depend on productivity of the  
12 site. If the site is productive perhaps the result of  
13 these logging practices would be negligible, but if the  
14 site is marginal site, its nutrient capital; in other  
15 words, the basic material, nutrition, that obviously  
16 could be questioned.

17 I cannot hundred per cent say this tree  
18 wouldn't be growing as well if this and that because  
19 very much depend on the site productivity, on its  
20 nutritional capital in the first place; however, this  
21 is again the problem with our forestry practices where  
22 we don't know usually what the site productivity is  
23 because we do not sample these "productivities" during  
24 the harvesting or after harvesting is finished, and  
25 that may change. Am I clear?



1 Q. What might change?

2 A. The standards of the site which is  
3 the productivity of the site.

4 Q. Now, I believe we finished yesterday  
5 with slide 150, so we will start today with 151.

6 A. Madam Chair, I am taking the lights  
7 off.

8 Q. And this is described as damage by  
9 scleroderis fungus, 1970.

10 A. No, no, we are on the wrong slide.

11 Q. Wrong one.

12 A. Here we are. Nobody will mistake  
13 this. No, no, go back.

14 Because one of the risks I have mentioned  
15 already are not only the wind, the disturbance by  
16 blowdown, the insect, diseases and so on. One of them  
17 of course are fungi and here's a typical example of  
18 scleroderis damage done to the stands established by  
19 seeding.

20 I have done my seeding myself here and I  
21 remember it very well. It was cut-over, site prepared  
22 in 50s or early 60s I just cannot -- what is the date?  
23 I think it was -- but in one way or the other --

24 Q. 1965.

25 A. 1965. Okay. These sites were site

1 prepared and reseeded for 50-, 60,000 seeds per acre,  
2 large number of these, and the seed germinated very  
3 well and it was nice, we had a green carpet of  
4 regenerated jack pine on these sites; however, after  
5 five years all of sudden this happen, this scleroderis  
6 move in, it's a fungus which can be deadly.

7 It was apparently introduced from United  
8 States and I have visited some red pine plantation  
9 there way back and it's a deadly disease which may hit  
10 these new and even older stands and just destroy them  
11 completely.

12 Now, again, see here we go back, that  
13 seeded area perform very well at the beginning and I  
14 was very pleased about and all of a sudden this disease  
15 moved in and destroyed all what you have tried to do  
16 here.

17 This area I visited two years ago. I  
18 have collection of slides on it, but I didn't include  
19 it because I think it would probably take too long to  
20 elaborate all of those things. But the fact is that  
21 this plantation now recovered to some degree but it's  
22 very open, with minimal trees per acre. The additional  
23 damage here was done by snowshoe hare which I didn't  
24 expect either.

25 After this area has recovered from this

1 disease, the hare, snowshoe hare move in and did  
2 additional damage. So it's not a stand which I would  
3 like to see to being compared with the previous stands  
4 what we've had before.

5 Q. This is now slide 152. I don't know  
6 if you -- one of the problem is that these slides are  
7 pretty -- I wonder if I could take that light out.

8 You recognize jack pine planted and you  
9 may recognize, Madam Chair, spruce planted here. The  
10 original stand -- again, this is quite old cut-over and  
11 the original stand was made of black spruce and jack  
12 pine and after it was cut you can see quite a bit of  
13 debris here on the ground from the slash, and the area  
14 was planted to these two species which were the  
15 original component of the original site, black spruce  
16 and jack pine.

17 And you can see the drastic difference in  
18 the growth of jack pine which take off very quickly at  
19 the beginning, at the establishment and spruce which  
20 was planted here, is sitting there and growing very  
21 conservatively, I would say, comparing to the jack  
22 pine.

23 And that seems to be the dynamics of many  
24 of these mixed stands of jack pine and spruce where,  
25 after clearcutting or after harvesting in general, if



1 you clearcut it or not, jack pine usually takes very  
2 quickly very dynamically with surprising growth and  
3 black spruce conservatively stay behind and try to  
4 catch up later on. And perhaps that should clarify  
5 some misunderstanding which exist about the tolerance  
6 and intolerance and the capability of jack pine versus  
7 black spruce.

8                   The nutritional needs here by jack pine  
9 are exploited very quickly after jack pine get  
10 established by exploring or by exploiting the stratas  
11 of the soils very quickly, sinking their roots in quite  
12 a depth and growing very well, it's great demand of  
13 phosphorus on many or these nutrients; however, black  
14 spruce is not that kind of tree, black spruce is  
15 waiting for the decomposition at the top level of the  
16 humus layer, black spruce has to wait to establish new  
17 root system, to advantage its root system and also  
18 black spruce quite frequently don't like a total  
19 exposure of the sites by the drastic clearcutting  
20 effect, they will open a large area to the solar  
21 radiation, to the movement of nutrients off the site,  
22 and so on.

23                   So any time I discuss black spruce  
24 vis-a-vis jack pine - as you know, my whole  
25 presentation here is very strongly oriented towards

1 black spruce - I like to see that the forester somehow  
2 make these differences, what jack pine can do at the  
3 certain stages of development and what black spruce do  
4 in there and this is very important when you plan  
5 strategy or prescriptions, when you try to say: Okay,  
6 I like to have black spruce back again and I like to  
7 establish jack pine by converting this species and so  
8 on.

9 So I think in future we are going to  
10 learn the lesson, again, that perhaps this jack pine  
11 here will not grow forever with speed and vigor which  
12 happened at the first periods of their establishment  
13 and growth, and that perhaps that little spruce here  
14 who is very "conservative" - I am not talking PCs or  
15 so - talking about conservatism in a sense of growth  
16 and tolerance and so on, that this tree will take his  
17 rightful place later on.

18 Some of the experiments I have done  
19 mixing these specie together on different spacings, by  
20 mixing them in such a way that I have alternate rows  
21 and I had groups and I had -- shown me very clearly the  
22 time for that spruce is coming and the jack pine may in  
23 many instances slow down eventually, slow down to such  
24 a degree that the spruces - and white spruces are  
25 really very good example - start really speeding up due

1 to the changes in the site itself; in other words, the  
2 top layer of this humus, new build-up of nutrients, new  
3 build-up of the forest floor, and then the time comes  
4 for spruces to really excel to its potential.

5 Q. Mr. Marek, you showed the Board some  
6 slides yesterday that indicated weevil damage on jack  
7 pines. Was that a problem at all in this plantation?

8 A. Yes, yes. I nearly forgot that many  
9 of these jack pine attack -- time when I took that  
10 picture, were already affected by white pine weevil,  
11 which is called white pine because I suppose it started  
12 in white pine many years back, but now is being  
13 introduced all over northern Ontario and do some damage  
14 to the tops. You have seen the damages on the previous  
15 slide.

16 Madam Chair, one of the thing is that  
17 sometimes it's interesting that while in this case the  
18 weevil was already attacking jack pine, it didn't  
19 attack black spruce. Now, again, I am not a weevil  
20 myself but I could presume here that there are certain  
21 choices made by this insect and maybe that this very  
22 quick and drastic growth of jack pine stimulate that  
23 beetle to get there, maybe that is total environment  
24 which affect establishment of these insects and  
25 preferring species one against the other, or for the

1 other.

2 And this is, again, we have a little  
3 knowledge and documentation on these processes, but the  
4 Europeans, I remember very well, are concerned about  
5 this very kind of, how should I say, delicate  
6 protective mechanism and they follow these and they act  
7 accordingly; in other words, they try to avoid these  
8 mistakes of course, but that doesn't mean that these  
9 mistakes can be avoided completely, there is always new  
10 aspects in this total aspect of the ecosystem  
11 development, the dynamics, which we still are not  
12 completely aware of or more research should be done.

13 But it affects the production, it affect  
14 the economics, it affects the total aspect of forest  
15 management renewal and forest management dynamics.

16 Is that...

17 Q. The next section of slides, Mr.  
18 Marek, is described as slides concerning second growth  
19 forest, and could we now have slide 153.

20 Did you want to make some introductory  
21 remarks about your concerns about the second growth  
22 forest, Mr. Marek?

23 A. Yes. I have to go back again, Madam  
24 Chair, that while in the past we have made many  
25 mistake, I think that we should, or are obliged to



1 learn from them and learn quickly as possible in order  
2 to prevent these mistakes.

3 And here is a cut-over of way back in 50s  
4 or back in the -- I took these slides where this  
5 picture represents a mixed wood forest originally which  
6 composition of the association was white birch, spruce,  
7 there was even some jack pine if I remember right,  
8 there was some aspen, and the primary species, in this  
9 case spruce, and jack pine was taken out, harvested,  
10 and what was left was the white birch mature trees and  
11 very immature understorey of balsam fir.

12 And it goes back to my previous statement  
13 where I said: Well, this is the worse thing what we  
14 can have because that balsam fir, while it grows<sup>1</sup> fairly  
15 well now after release here, because these spruce trees  
16 and jack pine trees were removed by harvesting, in  
17 other words we highgraded that stand, taking the specie  
18 we want and left behind what's there.

19 So this give you impression, if you show  
20 this to laymen or to people who do not understand  
21 dynamics of forest would say: Well, this is marvelous  
22 thing. We have already made regeneration here, balsam  
23 fir is nice and green and that's what counts and after  
24 these birch perhaps die or can also blow down in some  
25 cases, that we are going to have a plentiful

1 regeneration of a new crop.

2 Well, this is far from the truth because  
3 this is becoming curse now in our boreal forest where  
4 this balsam fir reached now certain stages, whole  
5 dynamics of the system changed, the growth of balsam  
6 fir is jeopardized by the spruce budworm.

7 And may I see the next slide, please.

8 Q. This is now slide 154.

9 A. This is the same area taken after,  
10 God, must be what 28 years or so, and what it represent  
11 is actually something which lots of people even now  
12 puzzles about and they don't understand. Where is our  
13 birch? Our birch is gone, which was there before, and  
14 balsam is still there, very heavily affected by the  
15 spruce budworm, matter of fact, most of that stuff has  
16 died since.

17 The snow covers of course the dessicated  
18 and gray and dead foliage of balsam, and look what's  
19 happening over there, poplar moved in from here and now  
20 after so many years dominates the site being  
21 overstorey.

22 Well, where did that poplar come from?  
23 There was some poplar on these sites, Madam Chair, but  
24 were so minimum actually that time I didn't pay  
25 attention to it that there was poplar here and there

1 dispersed through the original stand, but it achieved  
2 dominancy next 25 years that now growing very well with  
3 an annual height increment sometimes four, five, even  
4 six feet I have measured.

5 I cut these tree downs just to see how  
6 quickly and where that change happen here in the  
7 strata, the strata of these changes, and here the  
8 poplar stem is dead, balsam understorey.

9 So we started disturbance by cutting out  
10 spruce and jack pines leaving that beautiful  
11 regeneration of balsam underneath hoping that it would  
12 develop in future crop and the nature of these stands  
13 turn completely different way.

14 Poplar moved in, again, opportunistically  
15 because we create these conditions where poplar could  
16 move in, it assume first certain strata of core  
17 dominancy and then shoots up and made an overstorey.

18 Now, this is not unique, this is not  
19 one-acre experiment, this problem is right across the  
20 board in northern Ontario. That specie which were  
21 represented in original stands minimal; in other words,  
22 the stocking of this thing was very minimal, in some  
23 cases was not at all in that specific area perhaps was  
24 half a mile away or mile away, all of a sudden the  
25 nature showed either this specie opportunistically can

1 move in due to our interference in natural processes.

2 So the story here is, or result of story  
3 is that instead of original primary species as spruces  
4 and jack pine, we have forced nature to take its own  
5 way and establish a dominancy matter of nearly pure  
6 stands, sometimes they may be mixed because I think  
7 plans some time some will survive, you have a  
8 completely new ecosystem.

9 Now, this is a typical example of, again,  
10 risks of interference with nature. If these original  
11 sites were allowed to be destroyed by fires at the  
12 stage -- at certain stages of its development, surely  
13 we would have again here spruce, jack pine and maybe  
14 incident of poplar here and there, incident of birch  
15 here and there, but this way we converted a completely  
16 unknown dynamics.

17 This is not the end of this system of  
18 course, this new system which develop here will again  
19 make its own dynamics and it's difficult to  
20 prognosticate what problem we may have eventually with  
21 that second growth of poplar or matter of fact, in this  
22 case, new growth of poplar. That poplar may be exposed  
23 to all kind of problem of nutrition, may show problem  
24 of diseases, may show problem with all kind of other  
25 risks which we as yet do not know, because this is a



1 future here, here is the future and here is the future  
2 in the forest floor, they are going to react, and this  
3 pattern will develop sometimes to our surprise.

4 Now, I follow this by calling my learned  
5 friend from pathology and we look at these growth of  
6 second growth, second growth poplar, and while at this  
7 stage - and this is a problem with Ontario poplar -  
8 there are no sign cross the board of severe problem  
9 with pathogens, but there is always the possibility  
10 that pathogens will move in and make this second growth  
11 which do not belong there by nature, this is a  
12 manipulated stand by our interference, may show getting  
13 in a situation where we can avoid the effect of  
14 pathogen and other agents.

15 The reason I brought it here today, this  
16 is an opportunity where I can show you dynamics, the  
17 true dynamics based of logging interference. So it's  
18 not a simple game where you just cut or plant or leave  
19 it there and say: It is going to be okay. It will not  
20 be okay, it will develop this way.

21 Q. Mr. Marek, in your view is that  
22 problem, the problem of cut-over stands now populated  
23 with extensive balsam fir and poplar, a widespread  
24 problem in the boreal forest?

25 A. I have mentioned at the beginning

1       that this is a unviversal problem on deeper very  
2       productive sites. I didn't mention that, but I said  
3       this is a problem which goes right across the board; in  
4       other words, northern Ontario.

5               The unfortunate situation here is that  
6       these sites are usually very productive. They are  
7       sites where you have a nice physical profile of forest  
8       soils, nutritional, very rich, and instead of spruce  
9       and jack pine we are growing these species.

10              Now, many forester claim and say: Well,  
11       so what, we are going to harvest this poplar, which is  
12       already a problem because the technology in the next  
13       20, 30 years when these stands would be, would be ready  
14       for harvest or we are going to need these stands to  
15       harvest, we are going to take that poplar and indeed  
16       technology is here that we can produce products out of  
17       poplar. Product is not an unmerchantable species known  
18       from last 20, 30 years.

19              The technology is helping us. There are  
20       mills now who can produce very good product out of  
21       trembling aspen and other species for that matter. But  
22       the problem here is that it's going to be a very  
23       expensive process. I suppose that in order to build  
24       the technology you need nowadays millions of millions  
25       of dollars to convert these mills, the old mills, into

1 new technology.

2 I recently came from Alberta, from  
3 northern Alberta where I have seen some of the  
4 proposals by Japanese to establish this vast industry  
5 based mainly on poplar production in northern  
6 Saskatchewan, even Alberta. The forester, I expressed  
7 to him very clear the problem; yes, I know, that's fine  
8 they can -- what's going to happen to this second  
9 growth is always the question. You can use it now but  
10 what's going to happen in the future.

11 Q. Mr. Marek, is there any budworm  
12 problem in the balsam in these stands?

13 A. Balsam is dead, that's gone. Some of  
14 it is gone already, and I can show you pictures of it,  
15 and most of it will be gone in the future because I  
16 don't think we can protect that. Regardless what we  
17 do, you cannot salvage this balsam fir.

18 In many instances, it's such a shame that  
19 industry will not even use it. In many other  
20 instances, even if they could use it, the problem is  
21 what kind of -- it's always got to be mixed with better  
22 quality products like spruce and jack pine. You cannot  
23 use it in isolation, just balsam only.

24 Q. Now, I am going to that this  
25 opportunity to read a statement from your witness

1 statement to you and ask you to comment. It is  
2 repeated several times. I am reading it from the  
3 executive summary. This is the bottom of the last two  
4 pages of the executive summary, (xii), paragraph 10.

5 The statement is:

6 "The second growth forest, the lack of  
7 knowledge of its dynamics and its  
8 instability constitute potential serious  
9 problems for long-term wood supply in  
10 Ontario."

11 Now, could you just clarify exactly what  
12 in your view is the problem with regard to long-term  
13 wood supply?

14 A. Well, it's obvious that we won't have  
15 too spruce left in these cut-overs eventually because  
16 we are going to depend on some poplar.

17 Now, again I mentioned the technology, I  
18 have mentioned the problem of prioritization of our  
19 species, which in the past was simply concentrated on  
20 spruces, then later on on jack pine and now it seems to  
21 me that we won't have other choices to grab that poplar  
22 in many areas.

23 Q. Could I ask you, Mr. Marek, to your  
24 knowledge how is this type of stand described in the  
25 inventory?



1                   A. Boy, this is a problem because in  
2                   many instances I have followed the inventory throughout  
3                   and I think that we are not adjusting to these changes  
4                   because this stand was originally black spruce or solid  
5                   black spruce or mixed with white spruce or there was  
6                   some jack pine, whatever, it was inventorized for many  
7                   years as, say, Sb.

8                   Q. Sb, right, black spruce.

9                   A. In many instances, if companies  
10                  didn't adjust to this situation and are carrying this  
11                  old inventory designation, of course the younger stand  
12                  are also Sb.

13                  Q. In the inventory?

14                  A. In the inventory, right, in many  
15                  instances. Now, I agree that many companies are now  
16                  looking at this problem, are retyping, reclassifying  
17                  and I don't know where the progress is right now. I  
18                  don't know if all companies do it or just some  
19                  companies do it.

20                  It seems to me that re-inventory of our  
21                  total wood supply or wood growth, forest growth, needs  
22                  good overhaul. Where we are going to say: Okay, never  
23                  mind Sb here, this is a Po, this is a poplar working  
24                  group.

25                  So, again, I don't want to say that

1 Domtar or Abitibi is not adjusting to this, perhaps  
2 better they do quick as possible and start looking at  
3 these changes, but obviously the old inventory,  
4 wherever it's used with designation of previous stands,  
5 it has got to be changed and retyped into some kind of  
6 poplar working group, and I don't think it will be  
7 worthwhile to put balsam in because that's going to be  
8 done probably over the next five years.

9 So this is a very urgent problem, Madam  
10 Counsel, that government recognizes this problem and  
11 start looking in more detail on these new typing and  
12 new inventory data so we know what we got instead of  
13 guessing what we may have.

14 Is that the answer you want?

15 Q. If that's the answer, that's the  
16 answer I want.

17 A. You're free to asking more.

18 Q. If this is a widespread problem --  
19 well, if the existence of stands like this is a wide  
20 spread problem--

21 A. It is.

22 Q. --what is the implication of that  
23 with regard to the current level of allowable cut and  
24 the sustainability of that level?

25 A. Well, allowable should and will be

1 affected here because instead of spruce we have, of  
2 course, poplar here.

3 Now, the dynamics of these stands is  
4 unknown, as I mentioned in my dissertation here, and  
5 the allowable cut must carry this problem with it, but  
6 we cannot calculate allowable cut, Madam Chair, unless  
7 we know exactly what we have.

8 And perhaps that's what you are leading  
9 to, that we got to know exactly what we have and then  
10 we can pinpoint the allowable cut condition we may have  
11 5, 10, 15, 20 years from now to accommodate proper  
12 quality information into the timber management planning  
13 process.

14 Timber management plan is bible to me and  
15 timber management plan is something where we can go any  
16 time and say: Okay, here is what we have, that's what  
17 we are going to have, and then follow it up through the  
18 system and prescribe and manage forests accordingly on  
19 a sustained yield base or not sustained yield base.

20 Personally speaking, I think - again  
21 that's perhaps what she leads me to - is that the kind  
22 of sustained yield management is difficult to apply if  
23 you haven't got proper information, if you haven't got  
24 a goal where you are going to, and last I would say it  
25 will be a nightmare here when you start modelling or

1 prognosticating multi-purpose forestry where the other  
2 aspect of harvesting is considered for other purposes,  
3 for wildlife and for something else.

4 The fact if you know what you have, it's  
5 one thing, but if you don't know what you have and you  
6 if cannot prognosticate with certain assurance what  
7 you're going to have, how the heck are you going to  
8 plant 20 years operation. And that was a dilemma for  
9 me when I was working with MNR.

10 Then I said: I've got management plan in  
11 front of me, they said: We are going to cut and plant  
12 or we are going to cut and leave it. I says: What  
13 kind of dynamics are we talking about, what kind of  
14 situation we are leading into when they say we are  
15 going to do things like that, plant, and what are you  
16 going have in the next 20 years, what are you going to  
17 have in 40 years, and we are talking about sustainable  
18 management or sustained yield management.

19 It always was my problem because I run  
20 into the kind of brick wall when I said: Look at, this  
21 is not static, this is something, No. 1, we don't know  
22 very much about; No. 2 is, obviously changes will  
23 happen and we cannot account for them and plan for  
24 them.

25 So I think that obviously allowable cut



1 will be affected. There will be -- if this is going  
2 develop over large area, it's obviously going to be  
3 affected drastically by -- I'm not minimizing the  
4 problem. I think that it's going to show that in the  
5 area - I put it plainly, Madam Chair - in the area  
6 where we think we have wood we don't have it or we  
7 won't have it or we won't have it to the degree we hope  
8 to have it. So that's what's going to happen.

9 Allowable cut in these calculations,  
10 which is done according to the Crown Timber Act and  
11 everybody does it in the whole world, this is going to  
12 be revised and revised and revised if you talk about  
13 sustainability.

14 Q. Those are my questions on this slide.  
15 Could we have the next one.

16 MR. MARTEL: Can I ask a question  
17 because, again, it goes back to the whole issue of  
18 staff. If you have got staff foresters who have too  
19 large an area, how can they -- and we have heard over  
20 and over again that because of this much of the work is  
21 being done at desks now and computers and whatnot, not  
22 just from you but other people indicated that, how can  
23 we expect foresters to go back to check to know what's  
24 going on if they can't get away from a desk and are  
25 glued to it essentially, to know what we are going to

1 have for the future?

2 THE WITNESS: Well, Mr. Martel, there are  
3 two views on that. I agree with you fully that  
4 foresters are preoccupied with paperwork and perhaps  
5 they like to play with computers, that's a human thing,  
6 always something new. Many telling us that these kind  
7 of recognition or this kind of -- yes, recognition of  
8 the problems can be done by high flying satellites and  
9 there is a whole program. I will not go into it, but  
10 there's a whole program hoping that perhaps this kind  
11 of inventory can be by flying kites.

12 MS. SWENARCHUK: Q. Flying kites, Mr.  
13 Marek?

14 A. Flying kites. Do you know what kite  
15 is?

16 Q. I think I know what it is, yes.

17 THE WITNESS: I personally feel that for  
18 the management forester, and I'm talking a forester  
19 who's going to be responsible, who's going to be  
20 planning properly, who's going to know something about  
21 problems like this, he has to be released of it and he  
22 got to go in the bush.

23 We are still -- we are having  
24 helicopters, we are having all kind of means to get  
25 around. When I started in forestry, I didn't have the

1       helicopters, I had the rubber boots. Of course that  
2       cost money too, you have to buy rubber boots and you  
3       probably have to have two pairs every year, but besides  
4       that, I think that the recognition of these problems  
5       will lead to tell foresters that he has got -- in order  
6       not only to plan, but in order to be responsible to the  
7       public because public now is not stupid. They know  
8       there's something wrong with this area, and I'm going  
9       to talk later on from my experience in Beardmore.

10               There are people saying: What the hell  
11       is the matter with you. I was here 40 years ago, 30  
12       years ago, it was there, now we haven't got spruce,  
13       we've got this. Is that any good? How will it serve  
14       us in the future? So there are all kind of pressures  
15       to get foresters, Mr. Martel, to the place where they  
16       belong and that is in a forest.

17               I am horrified when I see that management  
18       foresters are planning timber management planning  
19       processes in isolation. That means that they are  
20       involved in technical implementation or write-ups,  
21       making paper without actually knowing what they're  
22       talking about.

23               I know foresters, timber management  
24       planners right now who go to the public hearings and  
25       visit that unit probably once a year or once a month or

1 something like that. Now, how the -- how can you  
2 possibly have a good know-how of the area of concern  
3 here when you don't go there, when you don't see that,  
4 when you don't follow it?

5 Many foresters stay in the one area only  
6 about two months, and I don't have to repeat it because  
7 I suppose that has been said during the hearing  
8 already, that many of these young foresters coming into  
9 the field stay there for two, three, maximum perhaps  
10 five years, then they advance of course and they're the  
11 people who should convey the truth, the absolute truth  
12 to the public about the condition of the forest lands.

13 No, it cannot be done. We are asking for  
14 too much. I think we naively think that technology  
15 will provide us with these answers and, thirdly - and I  
16 think that's perhaps a very personal view of mine on  
17 forestry - I think that many foresters are not willing  
18 really to abandon this desk job and go in the bush and  
19 really find out what's going on.

20 I have seen dramatic change, Madam Chair,  
21 after reorganization of MNR in 1972 where I was told  
22 that with the help of computers, and it was said to me  
23 by Deputy Minister and we had a big argument, you can  
24 imagine what kind of "discussion" we got into, where he  
25 said everything will be done by computer, everything



1 will be done by computer.

2 Well, computer is extremely helpful, too,  
3 it's an extremely important tool, but why should I as a  
4 management forester do the compilation? Why should I  
5 as a manager not be allowed to go into the bush and  
6 then go to the technician or secretary or program  
7 manager and say: Look, I want to have this processed;  
8 in other words, analytical documentation, but I am the  
9 manager, I'm telling you what goes in and the way it  
10 should be done, and then go back quickly in the forest  
11 again and look for more problems and then go back to  
12 the technician and say: Look, you sit here and you  
13 just work it out for me.

14 Why should foresters colour maps? I have  
15 seen foresters sitting day by day colouring maps in  
16 their offices because they are told to do so, because  
17 they are required to do so, because at the next  
18 meeting with the public they have to produce beautiful  
19 coloured maps with all kind of things there, this  
20 coloured yellow, green and so on. Let somebody else do  
21 that. I am the manager, I tell you because the manager  
22 should defend his position creatively.

23 I'm not talking about propaganda, I'm  
24 talking creatively. Tell people in Beardmore, Thunder  
25 Bay and to you in Toronto, who don't know anything

1 about forests, or majority of you, that this is the way  
2 it should be done, then you get credibility, then you  
3 get management, otherwise forget about it. I got  
4 carried away here.

5 MS. SWENARCHUK: Q. The next slide is  
6 slide 155, described as a 1955 spruce cut-over as of  
7 1990.

8 A. Right. The forester who would go  
9 there would find this, that the original spruce stand,  
10 black spruce stand of very high quality, very high  
11 values has been converted to balsam fir. There are  
12 some spruce there.

13 Q. Excuse me, Mr. Marek, how would the  
14 forester know if he hadn't been there a long time that  
15 this was a previously a high value black spruce stand?

16 A. Of course. If he doesn't know or  
17 that's theoretically being analysed as black spruce  
18 stand because black spruce was growing there before.

19 Q. Are there stumps in the picture?

20 A. Well, you can see the stumps, you can  
21 see all other signs of black spruce. Besides that, the  
22 forester should stay long enough to see some of these  
23 changes.

24 This is a matter of experience, mind you,  
25 Madam Chair, that this experience is lacking nowadays

1 because these people don't go in the bush and they  
2 don't know the history. They don't know every square  
3 mile of the area like I do around Beardmore, Geraldton.  
4 So, of course, they don't.

5 Q. The next slide is slide 156.

6 A. In one of the presentations by MNR -  
7 and I forgot which one it was - there was a picture of  
8 poplar, trembling aspen, growing on asphalt -- no, it  
9 was actually a cement floor, and that tree was  
10 obviously quite a few feet high and doing very well.

11 This picture has probably shown or should  
12 show the fact that trees are growing everywhere and  
13 that's true, but what it didn't say is what tree on  
14 what site and under which condition, how long and so  
15 on, and this is misleading.

16 I have here black spruce regeneration on  
17 pipeline. The soil is not feather mosses, the soil is  
18 not active humus layer, but the forest floor is made of  
19 boulders which were busted by blasting, piled up  
20 together, and this is a 1957 pipeline. That pipeline  
21 is producing black spruce because that black spruce,  
22 since 1957, had a chance to get here and there a little  
23 bit of organic material which accumulated there,  
24 there's enough moisture there, so that black spruce is  
25 growing and eventually it will leave it that way. In a

1 hundred years we are probably going to have a spruce  
2 which maybe about three, four, five, even ten metres  
3 high.

4 But the point, Madam Chair, is this, that  
5 you can grow trees anywhere. Our forests will not  
6 become deserts, as is often said, our forests will  
7 always have some trees or something on it. But what I  
8 am pointing is, what kind, how it's going to be growing  
9 and if that forest is suitable for our society's  
10 demands.

11 This black spruce here got established on  
12 a condition most intolerant or most devastating you can  
13 think of, but if that grows this way here, and those  
14 trees are approximately two and a half feet high after  
15 27 years or 28, surely we could grow very similar  
16 forests everywhere, everywhere, but the challenge for  
17 foresters and forestry is this, that by manipulating  
18 the forest floor and manipulating the system based on  
19 natural guidelines. Perhaps we cannot duplicate  
20 nature, but we can manipulate it in such a way that we  
21 learn from the nature and we do as much as possible to  
22 get products we desire.

23 In a picture I have seen in the statement  
24 presented to your Board, there was poplar growing on  
25 cement floor. Here, I say you can do the same thing



1 with spruce, but what results. I would like to have  
2 these trees -- in 27 years all trees should be at least  
3 15 metres high, that height measuring, and you can have  
4 it even more.

5 So in many cut-overs - this is a very  
6 symbolic statement I am going to make - we are  
7 preparing very similar situation on certain sites, on  
8 certain conditions, that kind of thing. True, black  
9 spruce will come back after so many years, but what  
10 kind of forest, and that is, according to Baskerville's  
11 statement, and I use it quite often, management should  
12 improve the condition. They should have technology  
13 ways. Imagination means to do better.

14 Next one, please.

15 Q. This is now slide 157.

16 A. Well, what is the difference between  
17 cement floor, showing the presentation by my learned  
18 colleague in the past to you, or this kind of site  
19 which is a 10 year-old cut-over and you have this  
20 problem of not growing spruce at all in some cases.

21 Q. Now this was --

22 A. This is not management.

23 Q. This was a 1965 spruce cut-over on a  
24 productive site.

25 A. Yes.

1 Q. And the photo was taken in 1989.

2 A. This doesn't occur everywhere.

3 Please do not misunderstand me, Madam Chair, that this  
4 occurs everywhere, but we have lots of area of this  
5 kind which never should be allowed.

6 Q. What are the species?

7 A. This is Labrador tea here and, of  
8 course, this is slash accumulated probably and that  
9 trees cannot grow in because there is such an  
10 accumulation of slash and it decomposes very slowly, so  
11 you won't have trees for many years to come.

12 Q. The next slide is slide 158.

13 A. How are you going to rehabilitate,  
14 put the growth back in the area which was destroyed by  
15 logging activities, and you have seen these pictures of  
16 ruts and water surpluses and so on.

17 Here is an area which was harvested with  
18 jack pine on shallow sites and very good stands was  
19 harvested here. After it was harvested, erosion  
20 happened here, so I tried to reforest by seeding; in  
21 other words, I took the cycle and seeder at that  
22 time -- you know, cycle and seeder, this rotating  
23 device where you put seed in it and then turn a crank  
24 and then spread the seed. And look at the recovery of  
25 the site after so many years.

1                   What year was that, may I ask?

2                   Q.   The cut-over was 1970 and I believe  
3   you took this picture in 1990.

4                   A.   Yes, this was a -- it's 20 years now.  
5   Sure, there is jack pine growing on it, but look at the  
6   size, look at the distribution and we will see what's  
7   going to happen in the future.

8                   So we should avoid any under condition  
9   logging to disturb sites to such a condition that you  
10   cannot satisfactorily establish growth.

11                   Next one, please.

12                   Q.   This is now slide 159.   Would you  
13   describe what this slide demonstrates?

14                   A.   Yes.   I have mentioned to you, Madam  
15   Chair, a few minutes ago about manipulation of the  
16   site, man's ability to optimize or even maximize  
17   production of the forest sites and here is an  
18   experience which I established many years back.

19                   It goes way back I think into the 50's  
20   and I followed it very carefully because it represents  
21   a site condition after cut-over back into the 50's  
22   where I have manipulated purposely strip of land,  
23   forest land, cut-over land in this area and I left  
24   this, what you see in front untouched.   I left it to  
25   the nature.

1                   What's happened here, the black spruce  
2                   stands, certain sites and certain conditions were  
3                   clearcut and I was planning to find out that if I do  
4                   something here with the productivity of the site, if I  
5                   do something to manipulate it, prepare the site again  
6                   into the potential activities, what's going to happen  
7                   compared to doing nothing, and look at that drastic  
8                   difference here of the growth here and growth over  
9                   there.

10                   These trees probably are three times as  
11                   high as the trees over here and represent product of  
12                   manipulation, and farmers know very well about this  
13                   thing or the agriculturalist know what they do. Here I  
14                   was, more or less, trying to prove that you cannot  
15                   leave the site as it is after clearcutting, after you  
16                   forest the area and just say good bye to it and come  
17                   back after 40 years and do your inventory. No, you  
18                   have to do it at the beginning.

19                   Again, that's a manipulation of black  
20                   spruce site by proper site preparation, and here I had  
21                   some tilling, mixing the humus layer with the site  
22                   below and it produced this kind of growth. And if I  
23                   didn't do it, I just left the site to its own recovery,  
24                   to its own destiny, here's what you get it.

25                   So it's a very visually impacting picture



1 of what a forester can do if he tried to put the site  
2 into productivity again or if you leave it and hope  
3 that nature will do it for you.

4 MADAM CHAIR: Mr. Marek, was that  
5 advanced growth?

6 THE WITNESS: Yes, lots of it was  
7 advanced growth here. This is seeded. (indicating)

8 MADAM CHAIR: The tall spruce are seeded?

9 THE WITNESS: That's right, on a site  
10 which is completely different from this site. So it's  
11 the manipulation of the forest floor what counts in  
12 order to bring the site into productivity.

13 MR. MARTEL: You are not saying  
14 scarifying, though?

15 THE WITNESS: I'm talking about  
16 scarification. Well, site preparation --

17 MR. MARTEL: I'm trying to be careful  
18 when you say manipulating the forest floor as opposed  
19 to using maybe a blade or something.

20 THE WITNESS: I'm fully aware of it.

21 MR. MARTEL: I'm just trying to get clear  
22 in my mind --

23 THE WITNESS: No, you are completely  
24 right because when you start manipulating sites you are  
25 changing the surfaces, you are manipulating. And here

1 is the problem, many of these manipulations may be  
2 beneficial, many of them may not be beneficial. Many  
3 of these things sometimes have a detrimental effect of  
4 the growth. So it is going to be the "proper" site  
5 preparation in order to do that.

6 MS. SWENARCHUK: Q. Mr. Marek, I think  
7 Mr. Martel's question is: When you are talking about  
8 manipulating the forest floor for the site that you  
9 seeded, was that process what some people would  
10 describe as scarification?

11 A. What bothers me is this is  
12 prescription and what you are suggesting is this: That  
13 in timber management planning frequently you have cut,  
14 clearcut, scarified and herbicide use after two years.  
15 There is a typical prescription, which I rate it. This  
16 is absolutely not satisfactory. The manager should go  
17 beyond this, be much more specific, how, when and so on  
18 and there are many ifs, which I tried to represent.

19 If I would have left it to natural  
20 regeneration I would have this. If I had manipulated  
21 these sites to my knowledge and to better as I knew at  
22 that time, then you can achieve this. (indicating)

23 I think that is the thing, the simplicity  
24 of approach to forest management when you say, clearcut  
25 scarify, plant, release. That's a whole prescription.

1 Perhaps they may add the description of site itself,  
2 may say sites which are very shallow, up to 12  
3 centimetres, sites which have a one metre or something  
4 like that maybe, but in general they are lacking  
5 definite positive prescription where you are going to  
6 say, how, when and so on.

7 And here comes the problem, Madam Chair,  
8 and that problem can be typified this way, that in many  
9 instances - and I just look at the guidelines again  
10 this morning on black spruce working group - where we  
11 going to say this: The site was inspected by forest  
12 manager or whoever and found to be such, prescription  
13 were made, prior cutting before harvesting. Bang! The  
14 forester goes back after two months or five months and  
15 sees a clearcut area and says: Well, what a mess, what  
16 am I going to do with it?

17 So what I'm saying is the situation may  
18 change drastically as you have seen in presentation of  
19 my slide. Prior cutting in fire originated stands as  
20 the condition are, stand, the original, he made the  
21 prescription and then after it's happened and that area  
22 has been clearcut and has been affected by your logging  
23 method, you are going to find different condition, and  
24 the prescription was done under the condition which he  
25 never find again, which are different conditions.

1                   MR. MARTEL: Well, are you advocating  
2           then that they should have to go out there before the  
3           cut and immediately following the cut in order to  
4           determine whether the original prescription was  
5           correct?

6                   THE WITNESS: Exactly, exactly. And  
7           change it again when he sees something is wrong two  
8           months after; in other words, steady monitor of the  
9           field like the farmer does, Madam Chair. It angers me  
10          when I see foresters aren't even duplicating the  
11          farmers. The farmer in order to keep in business got  
12          to go and examine his field how many times? I bet if I  
13          found a man who would tell the truth he say probably:  
14          Well, I have to go there every damn day to see how it's  
15          growing and how it's developing and what's going to  
16          happen and so.

17                   How can we in forestry make a  
18          prescription based on original condition, natural  
19          condition of the stand, make a prescription, put it in  
20          the 20 years plan and daring come and say to the  
21          public: I am managing on sustained yield.

22                   The farmer knows better, he check on it  
23          every time he goes out because that's his private, his  
24          livelihood; if he wouldn't do that, he would go bankrupt,  
25          I guarantee you that, because I know farming.



1                   So it's steady monitoring, Mr. Martel,  
2           which is absolutely essentially to keep watch, close  
3           watch what's happening in the forest, just like farmer  
4           does with his field.

5                   MADAM CHAIR: But you're saying as well,  
6           Mr. Marek, that as a result of steady monitoring that  
7           you would want to change the prescription at any point  
8           you as a forester thought it should be changed?

9                   THE WITNESS: That is correct.

10                  MADAM CHAIR: And that it should be  
11          changed quickly, and you've put your finger on a  
12          controversial issue at this hearing, as you know, and  
13          that is, some argument we have heard has been to the  
14          effect that the public doesn't want that, they want  
15          something that is predictable and traceable and  
16          something they can look at in terms of paper that will  
17          tell them exactly what has been done and what the  
18          future will look like.

19                  And how do you respond to that, if you  
20          say the forester must make decisions and make them  
21          quickly and, in essence, ask the public to rely upon  
22          his judgment?

23                  THE WITNESS: Madam Chair, it's a good  
24          opportunity to go into this subject because, as you  
25          rightly pointed out, there is a big conflict going on

1 and unless this conflict will be resolved in positive  
2 way so the public indeed will benefit, we will have to  
3 recognize few things which happen in the past.

4 I think that when I came -- I am personal  
5 here because been 40 years here I have learned one  
6 important lesson and, that is, as you pointed out, the  
7 public will interfere, the public have a right to ask,  
8 because we are managing public lands, we are not  
9 managing public domain, we are in the serve of the  
10 public and we should be conscious of it regardless if  
11 the area is under licence or forest management  
12 agreement or it's left in the ground, it doesn't make  
13 any difference.

14 We have a great responsibility. Somehow  
15 this responsibility should be interpreted in a way to  
16 the public that the forest manager in this country  
17 manage the public lands to his best he knows with an  
18 integrity which has two basic principles and, that is,  
19 the productive and protective aspect and I think that  
20 protective aspect has been neglected for years, I  
21 suppose since beginning, because the protective aspect  
22 is more difficult to ascertain, because the  
23 protective - and you have seen the problem we are  
24 having one - four years, five years you have a certain  
25 problem, then you have another problem on top of it.

1                   So cutting is simple, you remove,  
2   clearcut that's it, stuff goes to the mill, profits are  
3   made an so on. But the forester got to get deeply  
4   involved in the protective aspect, that's his  
5   profession and he has to do it, otherwise he going to  
6   be replaced by somebody else, Madam Chair, who will  
7   take that responsibility.

8                   Go farther then I will say that  
9   forester's role in this case is represent all scopes of  
10   forest land management. I know many foresters feel,  
11   and for that matter many other organization feel very  
12   strongly, that this kind of cooperative effort should  
13   be done by input of many other, and I don't disagree  
14   with it, I work with biologists all my life; but I also  
15   in my forestry career was biologically educated; in  
16   other words, I took some of these things where I am  
17   talking right now way back in 1938 when I -- '37 I  
18   started university, we were always told, listen to the  
19   public. Now how far can I listen to the public - that  
20   was your original question - how far can we listen to  
21   the public and have a meaningful input of the public  
22   into the field.

23                  One of my professors always said this -  
24   and I am going using Latin words, be patient with me, I  
25   will try to - is a voice of people voice of God, and it

1 was in Latin, vox populi, vox Dei.

2 And many forester feel strongly that  
3 while public has a great input, the public is not a God  
4 because we demand from public a knowledge which they  
5 don't have, we demand from public in our utilitarian  
6 society a role which should be active, which should  
7 come to the forester and say: Okay, I have this  
8 problem, what is your answer to that problem? What  
9 could we do, what could you do?

10 It should not be a problem where  
11 Beardmore Society start cursing and swearing the minute  
12 Industry because they don't do their job and they don't  
13 listen and they did this and they did that because they  
14 don't like, and so on. We haven't got the means to  
15 reasonable approach each other and say: Look, the  
16 reason I am telling you as a forest manager it should  
17 be done this way because I know, because I can prove it  
18 to you, and I go here with the public and say: Look,  
19 Joe, this what will happen.

20 Forestry is a science, Madam, an art, and  
21 art of forestry is something which has been denied to  
22 forester in this country for many years and I think as  
23 long as forester will not be able to communicate with  
24 public in artistic way, in a way where they say: Okay,  
25 technically speaking, scientifically speaking that is



1       how it works, it has been proven and I will show you  
2       results, in that moment the controversy, the  
3       confrontation, the fight between the public and the  
4       civil servants and the company forester will stop,  
5       because the dignity of forestry will be put in the  
6       proper place.

7                       How come, Madam Chair, that in 40 years  
8       in my activities as a forester even in Ontario public  
9       came to me so frequently and said this: George, what  
10      should we do, or what could we do, or what do you  
11      think? And I some time thought myself, get off my  
12      back, I want to play tennis, or I want to go to Cuba or  
13      I want to go... I sat there with these people and I  
14      said: Look, this is what I think. They said: Well,  
15      can you prove it? I said: Yes, I can, I have done it  
16      before. Here is the results of it. And immediately  
17      public say: Well, after all you are forester, you  
18      should know what you are doing.

19                      So, the forester going to, in this  
20      country, hit a certain place and be in charge of forest  
21      land, he got to prove to the public he's capable, able  
22      and responsible.

23                      Madam Chair, I may add to this one more  
24      thing, that you as a public servants or you as  
25      politician or people who act got support these ideas;

1 in other words, they must create laws written down  
2 where the forester will be free, free to express his  
3 opinion, express the opinion as truthful as he can, as  
4 he knows, and that way incorporate the protective  
5 aspects of forestry into the forestry management,  
6 forestry profession and well-being of this country.

7 MR. MARTEL: Well, can I ask a question  
8 before you leave that, because we've had a number of  
9 people say to us at the hearings that we should be  
10 entitled to speak to foresters outside of this sort of  
11 atmosphere that a hearing would have so that they would  
12 feel free to speak. Yet I believe that when you get --  
13 you hire on with the civil service, you take an oath  
14 which says --

15 THE WITNESS: Secrecy Act.

16 MR. MARTEL: That's right, that says you  
17 can't express that, you can only speak out but not your  
18 own personal opinions, following Ministry policy, et  
19 cetera, et cetera. How do you combine the two? How do  
20 you free the civil servant to speak out so that he's  
21 not worried about being fired in the end if in fact he  
22 says something that doesn't happen to be government  
23 policy of the day, the very angry sort of hierarchy  
24 that might occur.

25 THE WITNESS: I went through McAlpine,

1 and it seems to me McAlpine become issue now again in  
2 forestry profession, as you probably know, some of the  
3 articles, and so it's good time to perhaps...

4 But, Mr. Martel, Madam Chair, this  
5 puzzled me for many years and matter of fact I lost  
6 many sleepless nights because I got involved in it. I  
7 was -- well very shortly, the prerequisite of practice  
8 good forest management, as any professional activity,  
9 creative, creativity, sensibly, truthfully.

10 So we have a great stumbling block in  
11 some of these regulation which state you must do this,  
12 you must do -- in other words, you swear on the Bible  
13 that you will not divulge this knowledge and so on, and  
14 I think that perhaps this is a political issue, this is  
15 not an issue which will be resolved by professional  
16 discussion, because I think that any government which  
17 is really sincerely involved in good forest management  
18 for the public - and I am talking after all we do it  
19 for public - got to realize, got to realize that just  
20 as in Europe, the profession got to be protected; in  
21 other words, there got to be something there in the law  
22 which going to say: This we swear you, tell the truth  
23 by protecting you.

24 My father went through it, my grandfather  
25 in Europe, and it was a very painful process where

1 forestry profession was fighting on behalf. Perhaps we  
2 foresters in this country are just like that black  
3 spruce here, very conservatively doing these things to  
4 somebody else which is going to improve the environment  
5 or we think and I think that it's time perhaps forester  
6 cross continent will waken up and say: Look, it's a  
7 forest which I know something about, it is forest which  
8 I not only harvest but also protect and, thus, become a  
9 citizen, good citizen, professional man, et cetera.

10 Who going to create these conditions to  
11 law? I think it's got to be politician. I think the  
12 politician might step in finally and say: Look, we will  
13 protect you, but we need your service down to the  
14 forest in such a way that I as politician will depend  
15 on and trust you.

16 I think it's time that politician start  
17 speaking truthfully realistically to the profession and  
18 say: Look, you are asking for licensing, you are asking  
19 for this, you want to be this, prove it to me, prove it  
20 to me and we going to protect you.

21 One problems with the society is and  
22 democratic society which is utilitarian society which  
23 always demand, all the demands - give me more, give me  
24 more, give me more - is, and I have discussed it with  
25 philosopher matter of fact at Lakehead and in Toronto



1       where I said: Do you think the responsibility for  
2       forest should be transferred to the people of Norway;  
3       in other words, the professional people, and many  
4       philosophers said: Not in our society, we don't trust  
5       them. How can you trust foresters, they cut and they  
6       pile and they do all kinds of things at the same time  
7       saying we are minimizing, the same time saying they are  
8       mitigating, the same time we are eliminating this  
9       problem, everything is going fine, and the fellow Joe  
10      citizen and people come to me and says: Look at that  
11      mess, is that necessary?

12                 One defends that mess, the other one  
13      criticize, and there is nobody between, Madam Chair,  
14      that say: Look, now just a second, here are the laws,  
15      you are not allowed to do it and if you do it we are  
16      going to lower the boom on you. We are going to just  
17      say you trespass or you didn't do according to the law.

18                 And Crown Timber Act is a good example,  
19      Madam Chair. Crown Timber Act is full of ambiguities.  
20      This got to be eliminated and timber management put in  
21      a position to be really something I call viable. You  
22      got to go back, the in got to be such that it will be  
23      accepted by the public, and if errors are made they  
24      should admit it; if errors are made willingly and  
25      purposely, they should be persecuted.

1 I visit Europe very frequently and Europe  
2 changed to some degree, but believe me or not, the law  
3 in Europe is protecting foresters. The law in Europe  
4 prescribes that you will do, or, and perhaps, Madam  
5 Chair, we should have something like this. If  
6 politicians are sincere about the comments which  
7 belongs to all of us, and I think it's time to do it.

8 MS. SWENARCHUK: Q. Mr. Marek?

9 A. Yes.

10 Q. I think there are two slides left.

11 MADAM CHAIR: Ms. Swenarchuk, should we  
12 have our break now?

13 MS. SWENARCHUK: There are two remaining  
14 slides, perhaps we could complete the slides, if that's  
15 acceptable?

16 MADAM CHAIR: Well, how long do you think  
17 it's going to be?

18 MS. SWENARCHUK: Right. I shouldn't  
19 guess that.

20 MADAM CHAIR: Let's take our morning  
21 break.

22 ---Recess taken at 10:20 a.m.

23 ---On resuming at 10:50 a.m.

24 MADAM CHAIR: Please be seated.

25 MS. SWENARCHUK: Q. Mr. Marek, before we

1 go on with the slides I want to ask you a question with  
2 regard to the problem with the second growth that you  
3 have been describing.

4 Is it your view that the practice of  
5 large area clearcutting has contributed in any way to  
6 that problem?

7 A. Well, it initiated problem in the  
8 second growth. If large area clearcutting has not been  
9 treated silviculturally and left to the nature, as we  
10 did for last many, many years - since I suppose the  
11 large logging operations started up in the boreal  
12 forest - but even before in area of white pine for  
13 instance there are records, it contributed to the risk  
14 and insecurity and unknown of this "natural  
15 regeneration" which was result of the healing process  
16 by nature itself. In other words, there was no  
17 intentional measures taken, they were just left there,  
18 so...

19 Q. How did the large area of the  
20 clearcuts specifically contribute, in your view?

21 A. I think the problem with any large  
22 clearcut management, Madam Chair, is that you put  
23 everything out of control, especially when you of  
24 course don't treat it later on. So when you leave it  
25 alone, the paths of these different fluxes in the

1 ecosystem, it changes.

2 As you know ecosystem is very complex and  
3 is interconnected and when you let it go by itself the  
4 ecosystem, of course, will protect itself and  
5 vegetation will occur, but it just does not occur to  
6 the kind of prescription, especially not to the  
7 prescription of the nature which has its own way to run  
8 the ecosystem.

9 So the fluxes, the balances, the  
10 inter-relationships become disturbed and anything can  
11 happen there, and we see it on some of these slides I  
12 have shown you, if you leave that ecosystem after  
13 clearcutting, here is a product of it.

14 Sure, trees may come back, but surely  
15 didn't come back the way, in managed way, managed way  
16 or qualitative way which we as forest manager should do  
17 and not allowed to be here.

18 Q. Specifically with regard to the aspen  
19 and balsam fir components in these stands, is it your  
20 view that large area clearcutting contributed to that  
21 proliferation?

22 A. Yes, and something about it, one of  
23 the sad part again, Madam, is the fact that our  
24 scientists until recently didn't recognize poplar  
25 regeneration by seed as something which occur



1 frequently. I had to go all the way to Alberta to  
2 discuss this problem few months ago where the  
3 scientists finally - and one of the scientists I know  
4 personally very well - who is doing quite large study  
5 of problem trembling aspen in Alberta, because  
6 trembling aspen is become specie now which can be  
7 utilized, become merchantable specie, so obviously some  
8 of these things which coming out say: Okay, be careful  
9 with natural regeneration.

10 And natural regeneration, of course,  
11 occur on large area clearcut by two means, by two ways,  
12 and one is - if I may use - suckers usually come from  
13 the remnants of the root system, and here's the forest  
14 floor and here's the sucker from the trees, say here's  
15 the stump with the sucker --

16 Q. Mr. Marek, we will have to move the  
17 easel in order for the Board members to see.

18 A. Oh, I'm sorry.

19 MR. HUFF: We want everybody to see your  
20 art.

21 THE WITNESS: I'm sorry.

22 MS. SWENARCHUK: A. Okay, let's do it.  
23 So here is a stump which was poplar, was here standing  
24 a few years of crop, over here cut, and these are  
25 suckers, the root system. Sucker takes off here from

1 the bud and starts new tree here.

2 So the tree which you pull out, if you  
3 want to examine actually the sucker, the quality of  
4 sucker itself looks like this. Here is your tree, here  
5 is part of your root system with the cut. So it's  
6 something like this. Here's the original root system  
7 and here's your forest floor.

8 Now, seedling of course look completely  
9 different, seedling look like this when you pull it  
10 out, is -- and where is the difference here is that you  
11 have, this is a new root system, and here may be a new  
12 root system which develop like this. So there is a  
13 basic physical difference between a sucker and seed.

14 Now, until recently scientists, and I  
15 talked to many Canadian scientists about the problem of  
16 suckering of poplar because I encountered this problem  
17 in my plantations over some of the area, so they said:  
18 Well, it's not documented, it's not documented. I  
19 says: Come on, it's coming like weed all over the  
20 country and it's not documented. Well, so this is one  
21 of the problem is full documentation, historical  
22 background information is lacking and the scientists  
23 say: Well, we have other priority and so on.

24 But this becoming really issue in some of  
25 these stands which I have shown you where poplar took

1 over under canopy of advanced growth of balsam fir. In  
2 some cases you don't need the sucker, the seed comes  
3 in, find the microsites or condition of the forest  
4 floor, germinate there and establish itself again after  
5 years as dominant specie. So we need more research  
6 there too.

7 Large area clearcuts, we create condition  
8 ideal for that suckering and the seeding by site  
9 preparation, by the environments which again choose the  
10 seeds coming from everywhere. I mean, we are leaving  
11 so much poplar standing everywhere that it's no problem  
12 for poplar to capture the sites.

13 Q. And do you consider that the large  
14 area of these cut-overs also contributed to the  
15 proliferation of balsam?

16 A. Well, balsam is tolerant species  
17 which do very well under shade conditions; on the other  
18 hand, when balsam is left exposed, in many instances,  
19 does not do well because due to the exposure of solar  
20 radiation, in other words, the shear exposure but in  
21 many cases again on many sites where you have  
22 condition, balsam can do fairly well for period of  
23 time.

24 In other words, when you release that  
25 thing nothing it grows fairly well until it reaches

1 this pathological rotation we call it, where No. 1, the  
2 fungi or the quality of timber deteriorates by -- first  
3 of all by discoloration and eventually by rot which  
4 sets in; and, secondly, of course the effect of the  
5 spruce budworm.

6 And under many condition balsam can do  
7 fairly well, 10, 20, 30 years and all of sudden when  
8 it's sexually mature - and that happens usually between  
9 15 and 30 years - its sexual maturity is very important  
10 for the budworm, of course, as you know the larvae  
11 needs balsam fir and then eventually gets spread all  
12 over.

13 So when we create as manager such a  
14 condition where the opportunity is given, these species  
15 of course come in very quickly, drastically start  
16 occupying site; in other words, filling the niche which  
17 we have created.

18 Q. I am not sure whether you answered my  
19 question.

20 A. Say it again.

21 Q. Does the creation of a large area  
22 clearcut create the conditions suitable for balsam  
23 regeneration?

24 A. On certain site, yes; on certain  
25 type, no. Again, it's very site-specific and I cannot



1 give you a lecture on that one because there are books  
2 written that thing.

3 Q. All right. We will go to the  
4 remaining two slides then, please. Thank you.

5 Next. This is now slide 160.

6 A. The extreme condition of the  
7 cut-overs and the effect of harvesting plus effects on  
8 the site can be very disastrous, and this is a site --  
9 this is the slide, Madam Chair, which should be  
10 compared with regeneration, I have described that  
11 seeding in the previous two slides, you know, that jack  
12 pine area open and there was a small jack pine which I  
13 have established by seeding. So this is the condition  
14 of the site where I seeded jack pine on and, of course,  
15 the results after 20 years are shown on that slide.

16 Perhaps we can go quickly back to the  
17 slide so there was when I seeded it back to the other  
18 slide. So this was when I seed it, back further, this  
19 is the condition now. So results of seeding and trying  
20 to rehabilitate and restore the site by seeding.

21 So obviously it's going to take a long  
22 time here to get good merchantable stands.

23 Okay, next one.

24 MS. SWENARCHUK: Now, Madam Chair, we  
25 have finished the slides on the slide list and Mr.

1 Marek brought with him one additional slide which he  
2 wants to show as slide 161.

3 THE WITNESS: Yes. In conclusion of my  
4 slide presentation, Madam Chair, allow me to include -  
5 and perhaps somebody will object because it was not a  
6 part of my - I pick it up for very specific reason, to  
7 show very clearly what I mean site rehabilitation,  
8 site, especially the top strata of the humus and the  
9 site, the productivity, the impact of reforestation,  
10 the impact of environmental exposure like heat, solar  
11 radiation and nutrient cycling, and the whole gamut of  
12 these very complex thing.

13 The slide represent part of the cut-over  
14 which was not treated, that's here probably lying  
15 something like this, part of the cut-over which was  
16 treated, and the reaction to that manipulation, and we  
17 talk about manipulation previous.

18 If you have leave cut-over which was --  
19 let's say the cutting area under normal condition and  
20 you will not be engaged in very precise manipulation of  
21 these condition of these cut-overs, and that means in  
22 some cases on the large cut-over, as in a small  
23 cut-over, say small area clearcut management, the  
24 nature show us very clearly where we initiated positive  
25 results and in positive results prepare situation where

1 forests can start again and produce actively.

2 So you have this cut-over untreated, with  
3 dried up, dessicated feather mosses and you have an  
4 area which was treated by manipulating this surface  
5 area of this forest site and look what, just matter of  
6 fact few years happen here.

7 While this area, which is totally exposed  
8 to the elements of nature, which is totally involved in  
9 not producing what is supposed to be, the activity,  
10 biological activity, the elements of proper utilization  
11 of precipitation coming down involving nutrients, the  
12 mineralization of nitrogen, the return of all these  
13 element which sites need to produce, again be activated  
14 biologically and nutritionally, is very barren.

15 And here where it happened and the spruce  
16 was established again, forest floor become active,  
17 occupied by the feather mosses which were there for  
18 centuries, thousands of years and producing these  
19 ecosystem in perpetuity, its species, the accommodated  
20 biomes, the species which belong there, in this case  
21 spruce.

22 The elements are extremely well putted  
23 but the growth of these two bolytous, species of  
24 mushrooms - edible by the way, they are not poison,  
25 they are edible - we can establish on this microsite.

1       Why, because the site is active, the species  
2       represented previous ecosystem rejuvenated, activated  
3       recycling of nitrogen and mineralizatio occur and I can  
4       say many, many other aspects of biology which occur  
5       here, providing food for that spruce, these two  
6       mushrooms. That I would think represent the whole  
7       scope of my presentation in the slides, Madam Chair.

8               I am concerned that the foresters haven't  
9       got a good eye to see these things by involving in the  
10      practices, logging, where this is impossible to achieve  
11      or, if it's possible, it's going to take a long time to  
12      achieve it. In other words, what I am saying, that in  
13      many cases there exists dichotomy about forest  
14      management as a normal practice followed by certain  
15      prescriptions which may or may not achieve conditions I  
16      or forester should like to have.

17             I think it would foolish to say that  
18      products of our forests is a goal of one line of  
19      thinking. I think it would be foolish to expect forest  
20      produce that product forever if we are not properly  
21      understanding the working of these ecosystems.

22             I got very angry and very emotional many  
23      times in my forester life in Canada when I said: Look,  
24      this ecosystem is complex, let's investigate and my  
25      answer was: He must be some kind of eco freak. That



1 was the answer I got from MNR, from Lands & Forests,  
2 from Industry for 40 years.

3 No, my wish as a forester is to prepare  
4 this beautiful natural events where you and I probably  
5 get all we can benefit from. I am not eco freak at  
6 all, I am not red neck, I am not a liberal, I like to  
7 practice forestry which can produce situation where  
8 indeed I, in my case, go in this area pick up this  
9 mushroom and have it for supper and I do it all the  
10 time.

11 And I think that there is a certain  
12 contradiction in terms and in expectation that the  
13 forester who feel very strongly some kind one line  
14 economic benefits become immediately suspect nowadays  
15 to people who say: I like to see these mushrooms  
16 there, and foresters say: Never mind your mushrooms.

17 I think the forester is obliged to  
18 produce mushrooms, the forester is obliged as best as  
19 he can to put forest in a condition which resembles  
20 very much to the original stands which was here for  
21 many thousands of years. Forester must not say that  
22 nature is wasteful, that's his dictate upon nature.

23 I think it's very important that forester  
24 abandon thought that overmature timber is full of bugs  
25 and silvicultural slumps and that kind. He will never

1 make friends with deeply thinking people.

2 The normal forester is productive and  
3 protective, and my friend Mlinsek who I know very well  
4 is - or was president of IUFRO, International Research  
5 Organization. Meeting with him he said: Would you  
6 sell that thing to Canada, would you sell the idea that  
7 there is lots to be done in protective aspect of  
8 forestry, and I said: Yes, we will try.

9 So with that I would like to end my  
10 presentation of slides, Madam Chair.

11 MADAM CHAIR: Thank you, Mr. Marek.

12 I have one question and I think you have  
13 touched on this before, but do you see room in the  
14 boreal forest for some areas that would be treated  
15 along the lines of forestry as agriculture, that would  
16 be areas where plantations were managed to produce  
17 larger timber yields?

18 THE WITNESS: Very much so, but that's a  
19 special kind of forestry. Reading my presentation,  
20 obviously, you pick up on the subject which is, do we  
21 have these areas, No. 1. Do we have these areas.

22 Madam Chair, when I look back and analyse  
23 what I'm going to do in the area of my responsibility  
24 with Lands and Forests, MNR, I always said: First look  
25 at what I've got. That's the first thing. Inventory,

1 good knowledge of the land because farmer does it for  
2 centuries, too. He looks at the site and here I'm  
3 going to do this and here I'm going to do that, and I  
4 think it's important to recognize that northern  
5 environment of boreal forest is not very conducive by  
6 its sheer -- geological; the environmental, we have  
7 tough winters, slow growth, we have short growing  
8 seasons. We have all kind of problems which does not  
9 really suit itself to farming. That's why we have so  
10 few farmers around Thunder Bay and lots of things  
11 happen there, as you know.

12 We have to decide first if that area is  
13 suitable for intensified management, described as  
14 management where purposely the forester or forest  
15 manager manipulates the land for intensive production  
16 of wood, timber. So we've got to know first what it is  
17 and then go to the public and say this: Here we, for  
18 such and such a reason, are going to practice intensive  
19 management and make sure that public exactly know what  
20 it means, that means, and we are going to protect not  
21 only established, but we are going to protect area of  
22 this intensive management with the consensus that the  
23 public knows the groundrules of such an intensified  
24 management.

25 I had several professors a few weeks ago

1 from B.C and we were travelling area of the boreal  
2 forest again and discussing all these things and  
3 digging here and digging there and every one of them  
4 agreed that actually we are not practicing intensified  
5 managemnet in Ontario, even areas which are "being  
6 publicized as intensified area for production." They  
7 don't actually say timber production.

8 It's not because we do not create  
9 conditions for this kind of intensive management. When  
10 you leave poplar all over the cut-overs and utilize,  
11 when you leave the condition of large area clearcuts  
12 for these kind of risks, we are not even intending to  
13 practice intensive forest management. We say we do or  
14 we want to, but we don't.

15 Intensive management is the management of  
16 agriculture crops where you intensify production, then  
17 you go to the public and say: Look, that's what we're  
18 going to do, why we want to do it, here are the  
19 groundrules and then look for cooperation. If public  
20 is going to say -- and public is not always right,  
21 Madam Chair. If public is going to understand why, for  
22 what reason and is done in good scientific know-how,  
23 yes, I would say we need these areas, find it for me  
24 and then start negotiating.

25 Does that answer you?



1 MADAM CHAIR: Yes, thank you.

2 Do you think that in Ontario, such areas  
3 of intensive management, that there is room for such  
4 areas to provide industry with the timber it needs?

5 THE WITNESS: We are going to be tough  
6 spaced. We are going to be tough -- I think that in  
7 future what's going to happen is that we will have to  
8 convert many of these failures of past management into  
9 the intensified area of management in order to provide  
10 this wood.

11 When you look at the whole scope of  
12 forest lands management and look at these demands by  
13 industry for the timber, they are pretty high. And we  
14 just haven't got right now that position, that  
15 situation where we can say so much will be dedicated to  
16 the intensive management, so much will be dedicated to  
17 the multi-purpose management; in other words, where you  
18 are going to supply the goods and services for other  
19 purposes to survive, like moose.

20 I understand the moose is a very  
21 important issue and there's a dig discussion going on.  
22 What is good for moose, what is bad for moose, how are  
23 you going to cooperate or how are you going to  
24 integrate these conditions of our boreal forest into  
25 these two demanding products, timber and moose.

1                   Are you going to spray, are you going to  
2           eliminate poplar or are you going to have moose. If  
3           you are going to have moose, what's going to happen to  
4           timber. So there's a big conflict. There several  
5           guidelines, I read them all. They don't make sense to  
6           me in many instances. I think there's a vast field to  
7           improve these things because we haven't got the  
8           scientific background to really say this is what's  
9           going to happen.

10                   So, you know, like talking about  
11           multi-purpose management by just modelling things, it's  
12           fine to model it, but what kind of stuff is going into  
13           the model. Is the background information good enough  
14           to justify realistic results of the models.

15                   MR. MARTEL: Are you saying -- I want to  
16           be quite clear about this. Are you suggesting that, in  
17           fact, we need two distinct areas; that where you have  
18           intensive management to produce the fiber that industry  
19           needs, and then areas where, in fact, you have  
20           multi-use where we in fact can utilize -- or the rest  
21           of the user groups can utilize the forest?

22                   THE WITNESS: Yes.

23                   MR. MARTEL: That's what you are  
24           suggesting?

25                   THE WITNESS: Yes, you cannot have a

1 cake and eat it, too. And in forestry, I think we  
2 should learn again from history, from Europe.

3 I have visited several areas in Europe,  
4 in Austria recently, where this incorporated kind of  
5 pro and con has been resolved in management of European  
6 elk. European elk is a species which demands at  
7 certain times of the year bark from the trees. Now,  
8 what's better than bark of the spruce? They decided  
9 for a century they are going peel black spruce or white  
10 spruce or whatever, the Norway spruce there. So damage  
11 is tremendous.

12 How are you going to resolve this problem  
13 when you have elk and timber at the same time? How are  
14 you going to resolve it? They have elk which is hunted  
15 very economically. The price of elk's antlers and the  
16 demand is tremendous; it brings more than the timber in  
17 some cases. The forester who is in charge of these  
18 areas, of course, have this problem: How am I going to  
19 accommodate these two conflicting thing, that elk is  
20 killing my spruce and I want to produce timber for my  
21 sawmill.

22 There is always after great research,  
23 which was done, what the elk is asking for, why the  
24 damage is done. They found there are certain vitamins,  
25 there are certain demands or chemicals demands why the

1 elk has what to do it. On the other hand, how are you  
2 going to prevent it. So they planted -- or  
3 underplanted certain species which supplies in  
4 competition with or good competition or cooperation  
5 with spruces. The elk now, instead of peeling the  
6 spruce, start doing these things with the other species  
7 which do not endanger the production of timber.

8 So there's all kind of options open to us  
9 and I think moose management and the problem with  
10 spraying and the problem -- could probably be resolved,  
11 but if we go with this kind of simple way and say: Now  
12 I need this and I need also that, there will be  
13 conflict. There's no doubt about it.

14 MR. MARTEL: Your growth then, the amount  
15 of fiber you are going to have to require so that you  
16 can plant it adequately, it's guaranteed, the amount of  
17 fiber you need can't be fluctuating then?

18 You are going to have to set it up and  
19 say this is what by -- and I think the old plan was by  
20 the year--

21 THE WITNESS: 2020.

22 MR. MARTEL: By 2020 you've got be  
23 producing, what, 9 million cunits a year or something  
24 like that.

25 THE WITNESS: That's right.



1 MR. MARTEL: So, in fact, you can't  
2 change that? I mean, if you set out on that pattern  
3 you have got to set out the area to achieve that.

4 THE WITNESS: Oh, very much so. This is  
5 not -- you cannot achieve this in 5 years or 10, 15  
6 years.

7 As a matter of fact, we have very limited  
8 time to do this for reasons that there are these  
9 demands and the other, when we go into the quantity of  
10 the forest we have produced so far - I'm talking about  
11 these second growth ones - I don't think they recover  
12 and do study -- you know, playing the game of Russian  
13 roulette.

14 Well, what do you think these stands are  
15 going to yield by 2020, and one say: Well, I think  
16 it's going to be around 15 cords per acre, the kind of  
17 natural thing which usually 15 cords per acre nature  
18 provides us overall. The other is saying: Well, it's  
19 not going to be as much, it's going to be 8 or 10, and  
20 then you are starting a game which loses in reality  
21 because we really don't know, and let's go back to my  
22 presentation, we don't know what we are going to have  
23 there in the next 20, 30, 40 years. We really don't  
24 know.

25 You have to start someplace, Mr. Martel.

1       You have to start someplace and I think a study has  
2       been done to looking at these complex things and then  
3       starting planting trees and doing more reforestation  
4       and so on. What bothers me is that we didn't learn  
5       from previous history and we are doing it in such a way  
6       that you can say: Okay. Now, here I have a  
7       plantation -- I have to go to this.

8               MS. SWENARCHUK: The other sheet, the  
9       previous sheet. I guess we have two exhibits here,  
10      Madam Chair, and we will take care of that later.

11              THE WITNESS: There is the forest land of  
12      thousands of hectares, square miles. We can represent,  
13      to me, now realistically in this way: You have a patch  
14      of certain growth, say 20, 30 year old stands here,  
15      then right beside that you have a patch of overmature  
16      stand which was bypassed by the company because the  
17      volumes were too low and there was too much balsam  
18      there or too much jack pine, so they bypassed it,  
19      representing big risks.

20              Here we have a jack pine seeding which  
21      may or may not succumb to some other problems like jack  
22      pine budworm or scleroderis, and here we have a second  
23      growth and all of a sudden the cutting compartment here  
24      is, say, 10 square miles among this big landscape and  
25      represents all kind of risk, all kind of uncertainties,

1 all kind of things we right now don't know very much  
2 about.

3 Can any of us in a good conscience say  
4 that these plantations will be growing and eventually  
5 yielding us double or triple or even quarter, in some  
6 cases, quadruple, of yields in order to balance the  
7 possibly losses in the surrounding forest lands.

8 When FMA was created, I had a long and  
9 long discussion on the subject, what can we expect. We  
10 can expect integration of silviculture and logging.  
11 Now, I could speak probably hours on this whole  
12 integration, and you have seen integration on these  
13 slides here. The damages is done. That's integration?  
14 Obviously not.

15 We have naturalists moving in around  
16 here. Now, who is going to guarantee me that if I  
17 planted here 2 million trees or 20 million trees that  
18 this going to replace my insecurity of this surrounding  
19 area. Do I make sense to you now?

20 In other words, what I am talk about is  
21 how can we guarantee that this patch here is going to  
22 give us sustained yield management. Nobody in sound  
23 mind will say this is possible. So, therefore, the  
24 wood supply for the future is extremely uncertain and I  
25 think that it's very important to realize that the

1 survival of the mills of these big industries is  
2 depending on this.

3 We as yet didn't evaluate our realistic  
4 timber supplies. Where would wood come from when all  
5 of a sudden Red Rock or Thunder Bay will not have a  
6 secure supply in the surrounding area and have to go  
7 all the way 400 miles up north in the next 20 years.  
8 We can expect that because we are going farther and  
9 farther north. The distances now, 200 miles is not  
10 something exceptional. 20, 30 years ago, wood cut  
11 around Beardmore was there forever. Well, surely it's  
12 not now, I guarantee you that, due to this kind of  
13 condition which was created here.

14 I think that the kind of realistic  
15 inventories, the realistic look at these uncertain  
16 conditions is one priority of our political masters who  
17 are going to say: Look, I want to know what we really  
18 have.

19 MADAM CHAIR: Under the prescriptions you  
20 have discussed, if we planted -- if we created  
21 plantations in the future and the management approach  
22 you would have to the surrounding areas would be for  
23 multi-purpose use, also a form of protection for those  
24 plantations, you would undertake silvicultural work  
25 that would also protect the plantation in which you had



1 a very large investment with respect to timber supply?

2 THE WITNESS: I tried that. I think that  
3 one likes to protect what one creates and I think the  
4 means to do that are many.

5 I think that we didn't even decide as yet  
6 with a majority consensus how we are going to do it.  
7 How should George Marek protect his planation of  
8 limestone which is 25,000 acres, say 10 acres, or the  
9 plantation up north, north of Beardmore which are also  
10 30,000 acres. Will George Marek in his own knowledge  
11 use all means to protect this plantation, perfectly  
12 well knowing condition around that, perfectly well  
13 knowing this a condition over the broad landscape

14 Will George Marek prescribe tending after  
15 tending to eliminate poplar from the plantation, will  
16 unit foresters who are there now continue to do so,  
17 adding chemical pesticides to protect plantations from  
18 the budworm. These are the questions which has to be  
19 resolved.

20 I think that in a good conscience as long  
21 as we are going to keep these kind of arrangements or  
22 better, total forest landscape, we are going to have  
23 big problems, not only to maintain regardless what we  
24 do. Let's start chemical spraying or pesticides  
25 tomorrow, never mind bacillus thurengiensis, never mind

1 the present means, political means are implemented and  
2 start really throwing chemical herbicides and  
3 pesticides across the country in order to elimination  
4 the second growth of balsam and the survival of it,  
5 perpetuation of it and protecting this land here.

6 I have seen this kind of protection done  
7 in New Brunswick where use of chemical pesticides are  
8 free, where you have lots of problem with private  
9 lands, where you have distinctive demands for timber  
10 and protection. I think in the lung run, in the long  
11 run and I'm saying next 20, 30 years, it will prove  
12 that this kind of interference will be not possible to  
13 continue because it not only creates the problem  
14 between the public, private land owners of the timber,  
15 but creates a situation where our technology will not  
16 be able to keep with the nature itself.

17 You can control nature to certain degree,  
18 Madam Chair, and I think that results are showing  
19 nowadays that there's more understanding of ecosystem  
20 action and reaction, as a matter of fact, that our  
21 interference is limited.

22 In New Brunswick they have to spray  
23 because otherwise they wouldn't have any supply of wood  
24 at all. If they wouldn't have sprayed the budworm was  
25 eating New Brunswick out of balsam fir, what they got,

1 and the problem would arrive that they would have to  
2 shut down the mills. So they are burning or  
3 interfering steady just to continue the supply of wood.

4 Budworm adjusted to it. There is a  
5 genetic from budworm which is quite well known now that  
6 all these chemicals we are using, including  
7 agricultural for heaven sake, even including  
8 agriculture, we are having problems. In agriculture,  
9 the use of pesticides and herbicides is now questioned  
10 seriously in the scope of how much can we load nature  
11 with our inventions, with our means of protecting the  
12 investment.

13 We know our problems across the globe.  
14 You know, what are we doing to do with Brazil's  
15 forests, what are we doing there. What are we going to  
16 do with spraying the chemicals all over the  
17 countryside, perfectly well knowing that our  
18 agriculture already demanded for very basic purposes of  
19 human foods production, certain limited -- a limitation  
20 on it.

21 We know that agriculture is fighting  
22 serious problem and I think it's a problem which will  
23 have to be resolved on a global level, that we can only  
24 take so much, we can only give so much, we can measure  
25 the production of energy across the globe in certain

1 terms, not fully, because we don't understand this  
2 energy exchange, but I think that time is to get mean  
3 and get limited kind of or more philosophical aspect of  
4 this and say: What do we really worry -- what do we  
5 really want from our forest industry? What do we  
6 really want from our tourist industry in the scope of  
7 the overall philosophy, in which Canada should be.

8 It's a philosophical question which  
9 foresters should deal with and, according to his  
10 conscience, when he says: I cannot do anything else, I  
11 must do it in order -- then, obviously, the manager or  
12 the economist come and say: You have do it in order to  
13 keep the company going or keep the profitability and  
14 dividends and so on, and I think that earth is coming  
15 or human population is coming to this where we are  
16 going to say: Well, that's as far as we can go and  
17 from there on...

18 MADAM CHAIR: Now you are saying  
19 something different than I had thought you were saying.

20 THE WITNESS: I thought so.

21 MADAM CHAIR: I thought you were saying  
22 before that, yes, there are means, not just chemical  
23 protection, but natural means for protectig plantation  
24 areas.

25 If we can't protect plantation areas,



1       then in fact we would have to continue timber  
2       management operations over the entire forest.

3               THE WITNESS: We have already presumed  
4       that we have to have plantations. Madam Chair, if we  
5       had managed our lands properly 50 years ago when we  
6       started here -- and let's go let go back in the  
7       hindsight thinking.

8               If we had managed our stands and had a  
9       little understanding of natural processes, if we had a  
10      little bit foresight and said: Look, there was a  
11      beautiful black spruce stand here, let's try to get the  
12      same back; in other words, don't be ambitious to have  
13      two, three times a yield like you can do in certain  
14      areas, in agriculture and so on, and if we understand  
15      this and say: Okay, if we reforested or regenerated  
16      all our black spruce sites, which I have shown you, the  
17      way is was before, we wouldn't have this problem. We  
18      didn't do that. That's No. 1.

19              So No. 1, the problem was that we moved,  
20      we were too idealistic, we were thinking too high, we  
21      were thinking that we could quadruple our yields on  
22      certain areas and the boreal forest is not suitable to  
23      it.

24              When you go to the United States,  
25      Tennessee, Alabama and see the way they managed these

1 southern pines where they can - New Zealand. So you go  
2 into these areas where growth can be really  
3 intensified, where you have trees growing in few years  
4 that size and so forth due to climatic conditions,  
5 that's one thing, but when you go to the boreal forest,  
6 these rock piles and these swamps - what people call  
7 it - they have completely different options.

8 Perhaps we fail right from the main. We  
9 have created all this second growth forest and these  
10 kind of silvicultural slums, as Baskerville says,  
11 silvicultural slums, what are we going to do with them.  
12 Then we created few plantations here and there,  
13 everywhere, and we are hoping to get the best out of  
14 it, many times not realizing there are great risks  
15 involved and, again, that picture. (indicating)

16 It's a serious problem we are in and we  
17 have to somehow -- because of mistakes which were done,  
18 Madam Chair, some of them are really irreparable. Some  
19 of the problems we have in this big country, I have  
20 travelled from Newfoundland to British Columbia,  
21 foresters are standing there: What the heck are we  
22 going to do with this.

23 May I mention one example in Alberta,  
24 ma'am.

25 MADAM CHAIR: All right, and then we will

1 move on to Ms. Swenarchuk's questions.

2 THE WITNESS: Okay.

3 MS. SWENARCHUK: Q. Before you do that,  
4 Mr. Marek, is it your view that the problems of 50 and  
5 60 years ago that led to these silvicultural slums, the  
6 practices with which led to them, are to some extent  
7 still being practiced in virgin timber now?

8 A. Very much so, very much so. Planting  
9 tree doesn't mean very much, Madam Chair. As I said it  
10 before, we have to plant trees someplace, but in many  
11 instances it doesn't make sense either.

12 But let's go back to Alberta. In Alberta  
13 south of Hinton I was invited to look at it last  
14 summer, they had established natural stand of pine  
15 there by -- they were clearcutting and lush pure pine  
16 regenerates very nicely because there's lots of cones  
17 and the heating, so open it up, and so you can get  
18 really good regeneration in some of these areas without  
19 doing anything, and that's happened. That lush pure  
20 pine was too thick, it was too much of it.

21 The masters in Hinton - and it was not  
22 well right now - but the masters before, and I have  
23 requested from that time, matter of fact I will talk to  
24 the chief forester that time, he said: Too much of it,  
25 too much regeneration is no good, we like to have the

1 trees in the shorter period of time of larger  
2 diameters. So open it up, do a spacing.

3 So what they did, and I have a date as I  
4 can substantiate, from 25, 20, 30,000 trees of  
5 naturally regenerated pine, they space it up, juvenile  
6 space it, they space it up to what, they come around  
7 thousand trees per hectare, fine. They did it,  
8 everybody applauded it, it was publicized but they  
9 didn't expect that after they did the spacing, which  
10 cost lots of money, I think they spend over half  
11 million dollars on the area I have visited only.

12 Q. Mr. Marek, what's the size of the  
13 area of this plantation approximately?

14 A. This is not a plantation, this is a  
15 natural jack pine stand which was juvenily spaced  
16 with proper spacing, so it was natural regeneration of  
17 lush pure pine.

18 After few years they didn't go there, but  
19 then Alberta government came up, you fellows, you have  
20 to declare this area free to grow and here comes the  
21 concept free to grow, free to grow everything. So they  
22 have to look at it and declare it free to grow.

23 And what they discover was that nice  
24 large area, several thousand hectares, has been  
25 attacked by rabbits which girdle every tree of this



1 stand, stands of this size, spaced, expected to be free  
2 to grow or growing forever. The rabbits got into it  
3 and destroy by girdling the biome.

4 I can show you picture, I have it here,  
5 girdling it; and, secondary, the squirrels got into  
6 act, then besides squirrel, the mold got into act and  
7 everybody has destroyed this plantation which is  
8 completely killed now, thousands of hectares.

9 No more free to grow and, of course,  
10 Alberta government is embarrassed about this thing  
11 because they declare free to grow, put the normal in  
12 the allowable cuts and everything. Now, they have a  
13 vast area of dead trees but not so many.

14 So this shows you, Madam Chair, again the  
15 problem when you do something and over emphasize these  
16 kind of desired results: Oh, we going to have big  
17 trees in short time; oh, we going to do this. Here  
18 comes the stupid rabbit and just wipe out the whole  
19 darned thing.

20 So I think the foresters are pretty  
21 embarrassed and, believe me, we walked through it and  
22 the chief forester said: George, what you do with it?  
23 I said: Take bulldozer and start all over again.

24 Yes?

25 Q. Mr. Marek, in your opinion, is

1 industrial plantation management in northern Ontario  
2 still at the experimental stage?

3 A. I didn't get you.

4 Q. Is industrial plantation management  
5 in northern Ontario still at the experimental stage?

6 A. Yes, definitely; we know too little  
7 about future, we pay too little attention to the  
8 history and too bad, Madam Chair, you couldn't have  
9 spent some time with me at my plantations, I would have  
10 shown you what problem we had.

11 So it's experimental, we are just doing,  
12 we are prognosticating without substantiated, we feel  
13 that we can do it and hopefully I am -- I wish to be  
14 optimistic that the damage will be minimum so we can  
15 get something out of it.

16 Q. Do you want to have a seat now, we  
17 can move to the questions that I have for you.

18 A. I don't know how to sit down.  
19 I'd rather stand. Go ahead.

20 Q. Some questions about modified  
21 harvest, Mr. Marek, and I believe that Madam Chair  
22 asked you a question like this last week and I just  
23 want to be clear on the response.

24 And the question is --

25 A. Go ahead.

1 MS. SWENARCHUK: We have to mark those as  
2 exhibits. Excuse me, Mr. Marek, before I begin we will  
3 have to mark those drawings as exhibits.

4 THE WITNESS: Oh, these will be exhibits.

5 MR. HUFF: I will do it.

6 MS. SWENARCHUK: And while we are at it,  
7 I have a few more, Madam Chair. What's the last  
8 exhibit number?

9 THE WITNESS: If I had known that I would  
10 have made better.

11 MADAM CHAIR: This will be Exhibit 1522.

12 MR. HUFF: Do you want the poplar  
13 regeneration 1522, or the first one.

14 MADAM CHAIR: Let's put the other one as  
15 1522. And how do you want to describe this?

16 MS. SWENARCHUK: This is a hand drawing  
17 by Mr. Marek.

18 THE WITNESS: Showing location of the  
19 plantation among the total landscape.

20 MS. CRONK: I'm sorry, I didn't hear  
21 that, Madam Chair.

22 MS. SWENARCHUK: Showing the location of  
23 plantation within a total landscape.

24 THE WITNESS: Cutting in all over the  
25 place. And this is comparison of poplar established by

1 seeding -- by seed and established by root suckers.

2 MADAM CHAIR: That will be Exhibit 1523.

3 Hand-drawn diagram depicting poplar established by seed  
4 and established by root suckers.

5 ---EXHIBIT NO. 1522: Hand-drawn diagram by Mr. Marek  
6 depicting location of plantation  
within a total landscape.

7 ---EXHIBIT NO. 1523: Hand-drawn diagram prepared by  
8 Mr. Marek depicting poplar  
establishment by seeding and root  
9 suckering.

10 MS. SWENARCHUK: Then at this time I will  
11 do the additional ones, Madam Chair.

12 Four articles were provided to Ms. Cronk  
13 as part of the response to supplementary  
14 interrogatories and these would otherwise have been in  
15 the source book, but Mr. Marek just became aware of  
16 them more recently, therefore, I have copied the  
17 articles for the other parties, but I believe they need  
18 to be identified either as additions to the source book  
19 or as individual exhibits. Perhaps it's easier to do  
20 them as exhibits.

21 MADAM CHAIR: Individual exhibits. All  
22 right, start with 1524.

23 MS. SWENARCHUK: I think so. They have  
24 long titles.

25 MR. MARTEL: Go slowly.



1 MS. SWENARCHUK: This is an article by  
2 Carleton, Jones and Pierpoint, P-i-e-r-p-o-i-n-t,  
3 Prediction of Understorey Vegetation by Environmental  
4 Factors for the Purpose of Site Classification in  
5 Forestry: An Example from Northern Ontario Using  
6 Residual Ordination Analysis.

7 MADAM CHAIR: Ms. Swenarchuk, do you have  
8 copies for the Board?

9 MS. SWENARCHUK: I will be giving you  
10 these copies, yes.

11 MADAM CHAIR: Oh, those are your only  
12 ones. Do you want to repeat the title?

13 MS. SWENARCHUK: I have additional ones  
14 if you need, Madam Chair.

15 MADAM CHAIR: Well, it's easier for us to  
16 read the title as you are going through it.

17 MS. SWENARCHUK: Repeat the title. Yes,  
18 exactly. All right, let me do it then.

19 MADAM CHAIR: Could you repeat the title  
20 again, please.

21 MS. SWENARCHUK: The first one on the  
22 pile, Madam Chair, The Prediction of Understorey  
23 Revegetation by Environmental Factors for the Purpose  
24 of Site Classification in Forestry: An Example from  
25 Northern Ontario Using Residual Ordination Analysis.

1 MADAM CHAIR: How many pages in this  
2 article?

3 MS. SWENARCHUK: Nine pages, Madam Chair.

4 MADAM CHAIR: What year was it published?

5 MS. SWENARCHUK: It's from the Canadian  
6 Journal of Forest Research, Volume 15, 1985.

7 MADAM CHAIR: Thank you. That will be  
8 Exhibit 1524.

9 ---EXHIBIT NO. 1524: Nine-page article entitled:  
10 The Prediction of Understorey  
11 Revegetation by Environmental  
12 Factors for the Purpose of Site  
13 Classification in Forestry: An  
14 Example from Northern Ontario  
Using Residual Ordination  
Analysis, published in Canadian  
Journal of Forest Research,  
Volume 15, 1985, authored by  
Carleton, Jones and Pierpoint.

15 MS. SWENARCHUK: The second one is by  
16 Brumelis, B-r-u-m-e-l-i-s and Carleton, The Vegetation  
17 of Post-logged Black Spruce Lowlands in Central Canada,  
18 Part I, Trees and Tall Shrubs, 8 pages, published in  
19 the Canadian Journal of Forest Research, Volume 18,  
20 1988.

21 MADAM CHAIR: That will be Exhibit 1525.

22 ---EXHIBIT NO. 1525: Eight-page article entitled:  
23 The Vegetation of Post-logged  
24 Black Spruce Lowlands in Central  
25 Canada, Part I, Trees and Tall  
Shrubs, published in Canadian  
Journal of Forest Research,  
Volume 18, 1988, authored by

1 Brumelis and Carleton.

2 MS. SWENARCHUK: Next is the second in  
3 series, Vegetation of Post-logged Black Spruce Lowlands  
4 in Central Canada, Part II, Understorey Vegetation.  
5 This is also Brumelis and Carleton, from the Journal of  
6 Applied Ecology, 1989, Volume 26, again 8 pages --  
7 sorry, 18 pages.

8 MR. FREIDIN: 18?

9 MS. SWENARCHUK: Sorry, 18 pages.

10 MADAM CHAIR: That is Exhibit 1526.

11 ---EXHIBIT NO. 1526: 18-page article entitled:  
12 Vegetation of Post-logged Black  
13 Spruce Lowlands in Central  
14 Canada, Part II, Understorey  
15 Vegetation, published in Journal  
of Applied Ecology, 1989, Volume  
26, authored by Brumelis and  
Carleton.

16 MS. SWENARCHUK: And the fourth, Madam  
17 Chair, I believe this is in press and I will have to  
18 verify where it is to be published, I believe it has  
19 not yet appeared.

20 This is: A Simple Forest Succession  
21 Model and Its Application to the Boreal Forest of  
22 Central Canada, McLelland and Carleton, and the version  
23 we have has 24 pages, and then an additional two pages  
24 of figures.

25 MADAM CHAIR: That is Exhibit 1527.

1       ---EXHIBIT NO. 1527:   24-page article entitled: A  
2                                   Simple Forest Succession Model  
3                                   and its Application to the Boreal  
4                                   Forest of Central Canada,  
                                  authored by McLelland and  
                                  Carleton.

5                           MS. SWENARCHUK:   Now, Madam Chair, I am  
6       beginning now where I thought I would begin at about  
7       9:30 this morning.

8                           Q.   Some questions about modified  
9       harvest, Mr. Marek.

10                          A.   Yes, Madam.

11                          Q.   As I say, recalling a question from  
12       Madam Chair of last week and this has to do with the  
13       volume obtainable by modified harvest, and the question  
14       is whether the volume of timber per unit area is  
15       reduced -- the volume of timber available from harvest  
16       per unit area is reduced if modified harvest is used?

17                          A.   There are two aspects of modified  
18       cutting or any small area clearcut management where you  
19       may get an increment from standing timber which was  
20       left for seed source, so if you leave this area for  
21       next coupe there is certain increment and value  
22       occurring in these stands.   That's logical, you leave  
23       the timber longer for three, four or five, 10, 15 years  
24       you have additional volume accruing in this leftover  
25       stand.



1                   The other thing, of course, is the  
2       negative aspect of leaving that you have quite  
3       frequently the losses to blowdown, additional blowdown  
4       as it usually occur in under condition extended period.

5                   Now, can you please visualize situation  
6       where you have an area of large stands before cutting  
7       before it's been disturbed, the natural processes there  
8       are natural blowdown or natural losses to insect,  
9       diseases, natural happenings which somewhat decrease  
10      the value of the stand, that's happened, of course that  
11      is a normal process and I dealt with it at the  
12      beginning of my slide presentation.

13                  So if this natural process is continue in  
14      standing timber, there are frequently or could be  
15      incorporated in the, not natural losses, but the losses  
16      caused by strip cutting and there perhaps the strip  
17      cutting have a larger volume which will be naturally  
18      blown down anyhow.

19                  So while we were researching the subject  
20      with Crossfield and Fleming way back on Lake Nipigon  
21      Forest there, it occurred to us immediately from the  
22      beginning that we are not expert in this, how you  
23      recognize tree which blows naturally down or how do you  
24      recognize tree which blow down by interfering by strip  
25      cutting. And I think that this discussion we resolved

1       that, we said: Well, we have got to get Dr. Whitney in  
2       who is an expert and let's look at it and have  
3       reasonable results on it.

4                   And even Whitney had a problem with it,  
5       and I remember clearly saying: Look, this may be from  
6       natural causes, this may be affected all of it with  
7       that effect of openings so on, I cannot tell you that  
8       tree would blow down or not.

9                   So here we have a certain discrepancy but  
10      basically we are talking about two things; one, there  
11      is natural occurrence of blowdown which happen anyhow,  
12      and perhaps sometimes Industry feels this is more  
13      impacted by these openings, by this -- and it's a toss.

14                  I think that, realistically speaking, the  
15      additional blowdown which may occur one way or the  
16      other is justifiable for the sake of good natural  
17      regeneration of species which occur in the clearcut  
18      areas, No. 1, No. 2, I think it would be fair to say to  
19      the Industry that they have a role to play in  
20      minimizing these losses by having machinery and method  
21      to accommodate this blown down timber where it is, by  
22      natural or by effect of disturbance and strip cutting,  
23      to utilize and remove it from the area.

24                  Q. Mr. Marek, I would like you to go to  
25      the Fleming and Crossfield paper, we will take a look

1 at that.

2 MS. SWENARCHUK: Madam Chair, Mr. Martel,  
3 that's I believe the last paper in Volume 1 of the  
4 source book.

5 MADAM CHAIR: Source book 1 or 2?  
6 Ms. Swenarchuk, 1 or 2?

7 MS. SWENARCHUK: One.

8 MADAM CHAIR: Source book 1.

9 MS. SWENARCHUK: You think I had been  
10 doing all the talking, Madam Chair.

11 Q. And I would like to look first at the  
12 abstract -- we will just wait until the Board has the  
13 article, Mr. Marek.

14 MADAM CHAIR: Proceed.

15 MS. SWENARCHUK: Q. Looking at the  
16 abstract now -- do you have it, Mr. Marek?

17 A. Yes, I have it.

18 Q. We notice from the last line that  
19 this study looked at strips in the Beardmore/Nipigon  
20 area; is that correct?

21 A. That is correct, I worked on it.

22 Q. Okay. And I am just going to  
23 underline the results as described in the abstract,  
24 sixth line down:

25 "Total potential losses resulting from

1 operational strip cutting averaged 6, 7.8  
2 and 10 per cent of the merchantable  
3 volume in the leave strips for 2, 3 and  
4 4-year leave periods respectively. This  
5 corresponds to potential losses over the  
6 entire forested area of approximately  
7 2.4, 3.1, and 4 per cent respectively.  
8 Losses of strip cutting can easily be  
9 over estimated if natural attrition is  
10 not accounted for."

11 Now, I would like us to look at the  
12 discussion and conclusions of the paper which occur at  
13 page 19, and if we look at the right-hand column of the  
14 page --

15 MADAM CHAIR: Is that page 19?

16 MS. SWENARCHUK: That's correct, madam  
17 Chair.

18 MS. SWENARCHUK: I will read some of  
19 this, Madam Chair, because it will assist I think in  
20 getting into the issues.

21 Q. Mr. Marek, at the top of the  
22 right-hand column we notice that, carrying over from  
23 the previous line:

24 "Leave time was the single most important  
25 factor affecting volume losses."



1                   You agree with that observation?

2                   A. Yes, leave time has something to do  
3 with, of course, because you have mortality occurring  
4 every year periodically by your different biome being  
5 destroyed depend on the conditions of the weather and  
6 so on, yeah.

7                   Q. And we see also in that paragraph  
8 that:

9                   "Two types of strips were examined."

10                  But the last line of -- the last four  
11 lines of the paragraph indicate that:

12                  "If only operational strips less than  
13 55 metres wide, greater than 55 metres  
14 wide are considered average losses  
15 dropped to 6, 7.8 and 10 per cent  
16 respectively."

17                  You agree with that?

18                  A. Well, you see this whole thing has  
19 been done in situ; in other words, this is a study  
20 which was done only one year, this is a study which  
21 dealt with very different condition actually from strip  
22 to strip, but when you consider one parameter, and that  
23 is the strips that were left, and that is only part of  
24 it, part of the story, yes, I would say that's probably  
25 good observation.

1 Q. Okay. Now, I think the next  
2 paragraph is important for understanding the findings  
3 overall:

4 "The above --".

5 MR. FREIDIN: Madam Chair, if I might  
6 rise. I think when we are dealing with a scientific  
7 article like this, that rather than have counsel refer  
8 to a certain portion, excerpt a portion and say do you  
9 agree with this or do you agree with that, I think the  
10 appropriate way to deal with something like this is to  
11 ask the witness, if we are talking about leave time, to  
12 ask the question, does leave time have any effect on  
13 blowdown and, if so, could you indicate what that is  
14 and if does the article speak about that.

15 I would like to hear the witness'  
16 interpretation of this article and find out what the  
17 witness feels is the important portion of this report,  
18 not his response to Ms. Swenarchuk's selection of a  
19 certain paragraph.

20 In my experience that is the proper way  
21 to deal with articles like this and I make that  
22 submission.

23 MADAM CHAIR: Well, I think in the case  
24 of Mr. Marek, Mr. Freidin, we can't do anything to  
25 avoid getting his opinion on everything we are looking

1 at.

2 Throughout this hearing we have allowed  
3 this sort of examination to take place both ways, where  
4 counsel either reads in a statement and the witness  
5 agrees, or else you get the witness to say something  
6 and then you read the statement to him, which you do  
7 often, and have them agree.

8 MR. FREIDIN: I do that in  
9 cross-examination, Madam Chair, and that's the  
10 difference.

11 MADAM CHAIR: Yes. Ms. Swenarchuk, are  
12 you trying to build up to a point where you want Mr.  
13 Marek to discuss this?

14 MS. SWENARCHUK: Yes. Most of the point  
15 was in the coming paragraph, Madam Chair. I was  
16 attempting to lay the foundation.

17 MADAM CHAIR: Okay, get into the point  
18 quickly so we can hear his opinion.

19 MS. SWENARCHUK: Right.

20 Q. Let's look at the next paragraph Mr.  
21 Marek.

22 "The above percentages apply only  
23 to the leave strips which may constitute  
24 about 40 per cent of the original  
25 merchantable stand area, 60 per cent

1                   having been removed during the  
2                   construction of road right-of-ways,  
3                   landings, et cetera, and by the first  
4                   cut; therefore, in terms of total  
5                   forested area, operational strip cutting  
6                   is likely to increase the overall volume  
7                   loss to windfall and mortality by 2.4,  
8                   3.1, and 4 per cent for 2, 3 and 4-year  
9                   leave periods respectively, 40 per cent  
10                  of the percentage is given in the  
11                  paragraph above."

12                 A. Yes, I agree with. I think that I  
13                 would add this paragraph, which is very important to my  
14                 kind of testimony, that they are talking about:

15                 "As well, not attempt has been made here  
16                 to determine how much of this volume loss  
17                 is salvagable during the final cut."

18                 The reason I tried to mention this  
19                 because the domino effect, when you have, say -- let's  
20                 put it this way. You have a clearcut strip here,  
21                 that's a clearcut stumps, and you have strips which is  
22                 left uncut for seed source and the whole objective of  
23                 small area clearcut management in general, so when you  
24                 start blowdown, for instance, here, this tree goes down  
25                 like this for reasons, maybe too overmature, maybe



1 attacked by diseases, and automatically could go down  
2 and here excluding exactly why, but it goes down.

3 This affect of course, okay, immediately  
4 after this tree blown down goes against the other tree  
5 which may simultaneously, of course, visit. So it's  
6 again very complex thing, and when you analyse these  
7 things really analytically, and you can't in one year  
8 study, Madam Chair, you cannot grasp the whole complex  
9 relationship as far as the effects, the percentages.

10 It's interesting to know, and the reason  
11 we did this study was because the argument by Industry  
12 was: Look, everything is blowing down. First time we  
13 try these things way back everybody said: Look, why we  
14 doing this because everything going to be down and we  
15 don't want anything to do with it, we don't want to  
16 start with these strips. So we have to say let's  
17 document this analytically, scientifically, and we are  
18 going to examine these individual cases.

19 But again a large portion of this  
20 document is very tenuous, it's tentative because I was  
21 part of this study and we had a really tough time to  
22 determine really the causes why, but let me --

23 Q. The causes of what, Mr. Marek?

24 A. Causes by strip cut, initiation of  
25 strip cutting in small area clearcutting, period. This

1 is a problem that Industry, let's clearcut it because  
2 we can avoid strip -- the complexity of strip cutting,  
3 it's simple and on top of it, if you do small area  
4 clearcut-management you get involved in this problem of  
5 blowdown and so -- extreme blowdown and so.

6 I personally believe that we have to  
7 learn how to cope with these things, No. 1, by  
8 instituting better method of small area clearcutting  
9 without this risk of blowdown and, No. 2, eliminate  
10 under any condition any damage to the trees themselves  
11 by logging operations.

12 Here is the other point which I like to  
13 stress while I am at strip cutting. Don't forget,  
14 these trees or these stumps here were manipulated also  
15 by the logging operation; in other words, first of all  
16 the heavy machine had to go in this area, right, they  
17 are hauling wood back and forth and by, of course,  
18 doing this disturbance to the root system which is  
19 here, they are affecting eventually the stability of  
20 root itself and stability of the trees.

21 So you have a very complex thing here  
22 which this report doesn't even deal with. Because how  
23 you go, Madam Chair, establish effect of logging  
24 equipment on a root system stability, never mind the  
25 tree, it's root system, because that's where the

1 problem lie, the root system become unstable and the  
2 trees go down. So there are many aspect of these  
3 man-instituted changes in the total system.

4 Q. Mr. Marek, the authors went on to say  
5 that no attempt has been made to determine how much of  
6 this volume loss is salvagable during the final cut,  
7 and that likely a large proportion of material that has  
8 been blown down within two years of the final cut could  
9 still be utilized.

10 A. Of course.

11 Q. Is that your view having observed  
12 blowdown in these cuts?

13 A. Yeah, very much so. I just said it,  
14 I just now repeat it, that we have to learn with these  
15 problems, we have to help to salvage wood because  
16 otherwise it's being wasted and also effect these other  
17 trees. When you leave that blowdown here, eventually  
18 that big mess and that domino effect goes through the  
19 total stand which can have, of course, is being  
20 affected.

21 No, I agree with every word what he said,  
22 but I may caution you that all of these investigation,  
23 there are always done in a short-term kind of base and  
24 they shouldn't be done so, they should be long-term  
25 thing, we should know more about what's happening year

1 after, what's happened year after and so on, and only  
2 that way, Madam Chair, we are going to learn how to  
3 prevent it.

4 Q. Now, the authors also talk about  
5 natural mortality versus the harvesting mortality.  
6 I'll leave that.

7 A. We discussed that already.

8 Q. Yes. On page 21, in the last  
9 paragraph of the left-hand column --

10 A. Are you talking:  
11 "The majority of volume losses to  
12 windthrow..."

13 Q. Yes.

14 A. "...and stem breakage in both upland  
15 and lowland black spruce leave strips  
16 occurs near the edges of the strips with  
17 the exposed corners sustained the most  
18 damage."

19 Here I was actually trying to deal with  
20 this in this case here.

21 Q. Now, the next sentence is what I am  
22 going to ask you to comment on:

23 "As a result...", they say,

24 "...the volume losses are easily over  
25 estimated when strips are viewed from the



1 haul road."

2 A. Right.

3 Q. Now, can you indicate why that  
4 happens, why is there an over estimate?

5 A. He say right there, you have the  
6 exposed corners over there. The less you expose, of  
7 course, the less mortality you are going to have; the  
8 more you expose by width of the road and width of the  
9 strips in some cases, I have got to be careful there  
10 because we have other studies that claim that wider  
11 strip have less mortality or less damage to it, so  
12 being as it is, the wider anyway you have, and I dealt  
13 with it when I described cuts in the slides, the wider  
14 it is, usually the wind has more impact by shear force  
15 of going through the wide openings and that is,  
16 everybody knows, bush is disposed and put on the  
17 landings like this.

18 Q. Now, the next line and this is the  
19 last reference I am going to make to the article,  
20 indicates that:

21 "Careful planning of the layout of  
22 residual strips will help to reduce  
23 subsequent windfall and mortality. Of  
24 all the site, stand and strip layout  
25 characteristics examined, those which

1 reflected the general size and shape of  
2 the strips showed the highest correlation  
3 with percentage volume loss."

4 A. Right.

5 Q. Now, could you just briefly, given  
6 the time, indicate for the Board how you as a forest  
7 manager designed strips, modified cuts to attempt to  
8 minimize windfall losses?

9 A. Madam Chair, I think that we have  
10 dealt with this issue at the beginning when I was  
11 describing these difficulties with layout and  
12 directions, the road direction, and when I was showing  
13 the slide, this is perhaps new ballgame for some  
14 people, and my answer to it again, research should  
15 continue these projects, it's very pitiful, Madam  
16 Chair, that these working group which was established  
17 in 70s, and I was chairman for it, was not allowed to  
18 continue. I think we are paying dearly for some of  
19 these things which could have been researched last four  
20 or five years since I retired.

21 It was cut off and there is no farther  
22 research and CFS heard, probably the company, the  
23 company was not very much in favour of it either, that  
24 this decision was enough and it's restricting the  
25 company and they would rather clearcut and plant trees,

1 so...

2 Q. Mr. Marek?

3 A. That is when they said --

4 Q. Mr. Marek --

5 A. Yes.

6 Q. Was it your experience in instituting  
7 modified cutting that particular designs did minimize  
8 windthrow losses?

9 A. El correcto.

10 Q. Thank you.

11 MS. SWENARCHUK: This could be an  
12 appropriate time for the lunch break, Madam Chair.

13 MADAM CHAIR: Thank you.

14 ---Luncheon recess taken at 12:05 p.m.

15 ---On resuming at 1:35 p.m.

16 MADAM CHAIR: Please be seated.

17 MS. SWENARCHUK: Madam Chair, Mr. Martel,  
18 it was my intention to have Mr. Marek briefly review  
19 the witness statement. However, it's our assessment  
20 that the testimony accompanying the slides largely  
21 covers all the issues that he would have expanded upon  
22 in the witness statement, so I am going to deal only  
23 with a few outstanding issues, and I hope that if there  
24 are remaining issues in which the Board is interested  
25 that you will pose the questions.

1 MADAM CHAIR: Thank you, Ms. Swenarchuk.

2 I think you have made a sound assessment of Mr. Marek's  
3 evidence so far.

4 MS. SWENARCHUK: That is very reassuring,  
5 Madam Chair.

6 Q. Mr. Marek, I would like to ask you  
7 questions with regard to the issue of tending in  
8 plantations and particularly the questions relating to  
9 your experience of the amount and frequency of tending  
10 required.

11 Now, has it been your experience that one  
12 or two chemical tendings has generally been sufficient  
13 in the management of your plantations?

14 A. Madam Chair, it was my experience  
15 from plantations I established or I planned to  
16 establish and implemented later on to proceed with  
17 tending, release of the crop trees or the primary  
18 species, that one or two actions, one or two chemical  
19 tendings didn't respond the way I expected.

20 I will be frank. After I had tried many  
21 chemicals, after trying of course the manual tending,  
22 which was the first thing in 50's and 60s where  
23 chemicals were not as well known as they are now and  
24 the action and effect of chemicals, that in many  
25 instances the dynamics of the system are so vigorous,



1 so drastic that, as a matter of fact, in many, many  
2 case when you treat these plantations by chemical the  
3 response is vigorous grow of competition for few years  
4 or, in some cases, immediately after, establishing  
5 again or occupying the site or capturing the site by  
6 the same species which I tried to destroy or correct.

7 I think the very important thing here is  
8 to realize the objective of any interference or  
9 intervention into the dynamics of the plantation where  
10 the objective may be to kill competition outright in a  
11 certain stage, kill it out; and the second one would be  
12 to reduce the growth or limit the growth by injuring  
13 the trees by chemicals.

14 I, in my plantations, have decided I am  
15 aiming for intensive management; in other words, I want  
16 to see that the stands I established produce what I  
17 want it, and that is a pure coniferous stand based on  
18 stocking, based on dynamic of the growth and based on  
19 certain projection of yields. And then, of course, the  
20 other thing was, being just vaguely aware of the risks.

21 The chemical spray usually occurred as a  
22 second -- first of all, I tried manually release by  
23 removing the trees, competing trees or brush and then  
24 when I saw it coming back vigorously again, I used  
25 chemical.

1                   This is kind of historical perspective  
2       which I learned through the whole process, that when  
3       you use, for instance, manual techniques, like cutting  
4       the trees or dislodging them, the timing of the air,  
5       the timing of the action is very important. If you do  
6       it in the spring or if you do it in the winter you have  
7       a different reaction than if you do it in the summer.

8                   For instance, I have found very quickly  
9       that manual cleaning in certain times of the year had a  
10      different response of the growth, of the injured trees  
11      or trees; therefore, I said: Let's continue this and  
12      see what chemicals will do, in the hope that I would  
13      learn from this experience, compare, control and see  
14      what kind of really long-term result I can achieve from  
15      which to learn.

16                  To answer directly the question, I had to  
17      do it several times and, of course, then way back in  
18      50's and 60s when this process was started I had the  
19      benefits of free labour. That means I was using the  
20      general -- pardon me, the junior rangers - and you are  
21      probably aware of the junior ranger program,  
22      rangerettes now - and using that then I could really  
23      concentrate on quality because when you start dealing  
24      with this, you know, bids, when we talked about the  
25      hiring contractor, you always have a little problem,

1 but in this case I had very competent foreman who were  
2 educated, who were controlled by me, so they knew  
3 exactly what to do. So this way we could compare  
4 really the results.

5 The chemical tending in many of these  
6 plantations is done by different chemicals and I can  
7 name them, you have probably heard them before, there  
8 are quite a few. Under certain conditions, it also  
9 proved to me the different results, by measuring the  
10 sites by the vigor of the growth from the species I  
11 tried to eliminate or destroy.

12 So far up to now in the plantations,  
13 which are over 30 years old, which is probably one  
14 third of the rotation age -- I am saying that perhaps  
15 we could intensively manage the plantations, deal with  
16 a rotation of 60 years and, as I mentioned before  
17 originally when I started all these processes, my plan  
18 was: Well, you are going to produce 50, 60 cords per  
19 acre in 50 or 60 years in that province. It is not a  
20 realistic agent and it never will happen.

21 The preparation is important and that's  
22 why I was using chemical and I was hitting them hard  
23 and I realized they are coming back regardless what I  
24 have done. Not only that, that these plantations  
25 through the natural development of the ecosystem

1       itself; in other words, the build up of the forest  
2       floor, the ability of the forest to adjust to the  
3       trees, in other words, the trees, the spruce trees,  
4       their density is affected obviously by moisture,  
5       mineral glacial of nitrogen. All of these conditions  
6       affect the growth and affect the influx of this  
7       competition. It goes hand in hand.

8               So when I saw that these trees going to  
9       start competing again, I used chemicals again and in  
10      many instances I have to say that plantations which  
11      were 30 years old I had used up to two, up to three  
12      chemical tendings and in combination even with one or  
13      two physical, manual tending. So there are quite a few  
14      several processes involved.

15             Many of these plantations, if you go  
16      there now, still have a problem with competition, still  
17      I didn't achieve what I want to have, clear black  
18      spruce or white spruce plantations.

19             Now, what really surprised me recently is  
20      the fact that budworm which invaded this plantation for  
21      the last four or five years and was very late -- very  
22      late notice by MNR in order to do something about it -  
23      as a matter of fact, they don't even know the budworm  
24      were there - I have noticed that the whole dynamic  
25      change again and it's caused by the fact that when in a



1 conifer stand the foliage is impacted by the budworm  
2 which causes foliage to fall, blow down to the ground  
3 and the light density and the impact of temperature on  
4 the floor creates new dilemma than by warming area and  
5 getting more moisture to it, that it improves or  
6 enhances again the competition to farther problems.

7 Now, this has to be -- this objection had  
8 to be done critically in a period of one or two years  
9 because if you don't do it immediately that reaction  
10 is: Now what's going on here, and I think that it's  
11 very advisable in any kind of interference by chemical  
12 or by any interference which takes -- considers the  
13 structure and the quality of the stand itself, the  
14 forest floor has to be observed in order not to create  
15 further complications. It is a very interesting  
16 process.

17 Q. Mr. Marek, is it your opinion that  
18 further chemical tending will normally be required in  
19 plantations past the free to grow age age?

20 MS. CRONK: Excuse me, Madam Chair.  
21 Before Mr. Marek answers the question, I don't take any  
22 objection to the question because it has already been  
23 posed, but I do think on evidence this important that  
24 Ms. Swenarchuk should not be leading the witness.

25 So I don't object to this question having

1       been posed, but I wonder with evidence of this  
2       importance that could be avoided, if at all.

3                   MS. SWENARCHUK: I can try and rephrase  
4       the question.

5                   Q. Mr. Marek, what is your view with  
6       regard to tending requirements and the number of  
7       chemical applications probably required in plantations  
8       other than your own?

9                   A. I think the experience would be the  
10      same eventually. With the plantation outside my  
11      territory multiple spraying will be -- multiple  
12      interference will be required.

13                   Now, again, it depends on what you want.  
14      If the manager wants to have mixed wood stands, he  
15      wants to restrict the growth of poplar, he may get  
16      that. So if he wants to have a pure, very intensively  
17      managed stands, then of course there are other options.  
18      You just have to use the chemical substantially any  
19      time you have competition occurring and just keep the  
20      dominant spruce trees or conifer trees.

21                   I would say here and I add to some of the  
22      things which I haven't said in the past, that the crown  
23      density, crown closure is a very important factor.  
24      Madam Chair, it's obvious in open stands regenerated,  
25      regardless if it's by natural regeneration or if it's

1 by artificial regeneration, requires in a boreal  
2 forest - and I'm not talking about forests in general,  
3 I'm not talking about, say, southern pines, I'm talking  
4 about coastal forests - I think that in northern  
5 forests the crown closure will affect an influx of  
6 competition in the stand itself by sheer light,  
7 moisture, transfer and the nutrient cycling. That  
8 affects it considerably.

9               So if you have a stand, the original  
10 density may be just very sporadic and open spaces  
11 between the stands, you will immediately encourage  
12 large density of competition. If you are going to get  
13 very early crown closure; in other words, you are going  
14 to plant lots of trees which close the canopy and  
15 prevent the light penetrating to the ground, stimulate  
16 the ground for a condition which is very favourable to  
17 the conifers -- pardon me, the hardwood species like  
18 poplar, of course you have a problem.

19               I visualize the plantation of the nature  
20 I have established is going to require at least four,  
21 maybe even more interferences in order to get what you  
22 want. Presuming that the balsam, in case of balsam or  
23 presuming in case of spruce like I have there, that  
24 these stands will not be destroyed by the other risks  
25 and so on, budworm and so on. This is a problem.

1                   So interference will be necessary and the  
2           kind of single statement says all we require is one or  
3           two maximum interferences by chemical is very kind  
4           of -- well, seeing through rosy glasses, hoping it will  
5           happen. And while we have a lack of really 30, 40, 50  
6           year old plantations, except in some of these areas I  
7           have seen in the Clay Belt, some of the plantations I  
8           have seen, but we are very site specific, too. You  
9           cannot generalize these things.

10                   The one I am describing now is, say,  
11           plantations I have dealt with for 40 years, over 30  
12           years anyhow, and with the European experience I have  
13           and also which I gathered from parties parts, this  
14           again depends on many factors. Forestry is a very  
15           complex thing, so once you start interfering by  
16           chemical in the strip...which were not there before,  
17           you have a very open field of results. Again, we are  
18           lacking basic information.

19                   The United States deal with chemicals  
20           quite frequently. They have much wider experience. I  
21           have met people who work and who were using chemical,  
22           but even there the kind of environmental condition,  
23           time of spray, when you do it - as a matter of fact,  
24           you spray usually end of July or August, sometimes in  
25           the middle of August - well, what were the conditions



1 locally that day. We cannot spray in high velocity  
2 winds, that's one factor, but the most important thing  
3 is relative humidity, the whole environment and  
4 condition is what matters, the leaves, the  
5 photosynthetic aspects which has an impact on these.

6 Q. Mr. Marek, I want to turn to another  
7 subject now.

8 MADAM CHAIR: Excuse me, Ms. Swenarchuk.

9 Just one point, Mr. Marek, and I don't  
10 want to take you off topic and I know you are not  
11 qualified as an expert in protection, but I am not sure  
12 if I understand what your opinion is about the use of  
13 chemical herbicides.

14 I think you have told the Board that you  
15 would prefer to see a minimal use of chemical  
16 herbicides, but in some situations it's required.

17 THE WITNESS: Would you like to know what  
18 situation I'm talking about, ma'am?

19 MADAM CHAIR: Yes.

20 THE WITNESS: In intensive managed areas  
21 that concentrate on production of wood only, in areas  
22 where you decide that indeed one concern is wood  
23 production, in an area which I said had to be approved  
24 and designated, and I hope you understand what I mean  
25 by that, there are certain areas to do it and certain

1 areas not to do it; in other words, these systems which  
2 are new systems comparing to the natural system because  
3 we never had that before. I mean, nature doesn't  
4 create these conditions.

5 But wherever and throughout the world, in  
6 Finland, it doesn't make any difference, where these  
7 situations are capable and designated for timber  
8 production, we have to use the -- we must use methods  
9 or means to prevent competition; in other words,  
10 tending is absolutely necessary, otherwise we are going  
11 to waste money there.

12 There are two ways to do it, of course.  
13 In plantations, we have to start with a large number of  
14 trees to establish as quick as possible crown closures.  
15 So may I follow on this?

16 Once you have that and you cannot achieve  
17 it without spruce trees, you have to have lots and lots  
18 of trees there to get that crown closure, as much as  
19 possible, to affect the forest floors from the invasion  
20 of competition, and that's canopy -- that's one method.

21 The other method is that we are going to  
22 use the chemicals discreetly, respect the knowledge on  
23 timing. Perhaps we have still lots to learn about it.  
24 We cannot use chemicals in this community; in other  
25 words, double spraying and these things, we have to be

1 very accurate and that's what bothers me about the  
2 broad -- the overall matter, which is we just fly over  
3 and drop it and it's being controlled, but to what  
4 degree.

5 So it should be better control and better  
6 documented and maybe we'll learn from year to year about  
7 the effect of it; in other words, from the beginning of  
8 these interferences, when the sprays happen, that we  
9 follow it scientifically and document it, what kind of  
10 effect we have. Never mind in one or two or five years  
11 saying, it's all right or not all right. We have to  
12 know precisely what we are doing there.

13 Thirdly, I do not, Madam Chair, say that  
14 we will not use manual tending. In some instances, we  
15 have to use manual tending, in specific cases, and I  
16 realize it's more expensive due to the more intensive  
17 labour, but I think it will be necessary in order  
18 really to find out that, from my experience, there are  
19 times in the development of the forest, a new forest,  
20 intensively managed areas, I said intensively managed  
21 areas, that manual tending can be very successful.

22 By that I mean that I have in practical  
23 terms manually tended certain parts of the plantation,  
24 certain times of the year and just very generally I  
25 would state it's usually in the dry period of the

1 summer.

2 See, moisture has very much to do with  
3 it, not only what's in the ground, but also in the  
4 photosynthetic sense where the effect of these  
5 interruptions of the flow of water nutrients up to the  
6 crown is obviously handicapped. So the tree weakens,  
7 much more quicker than if it's done in the spring when  
8 the whole chemical reaction is very dramatic and trees  
9 need it most.

10 There are certain times, and I could show  
11 you but you didn't come to limestone, that I have  
12 documented plots where tending did marvelous job. In  
13 other areas north of Beardmore I have plots or areas  
14 which I have tended, also in completely different, say,  
15 granitical soil condition, that we were very  
16 successful. We didn't have to go back with these  
17 chemicals at all.

18 But answer me why, and I think again this  
19 is the fear for research where we have to go back and  
20 say: This worked under such and such a condition, can  
21 we use it practically in a large area and there the  
22 forester is going to have choiced. He may use  
23 chemical in some cases, he may use even manual tending.

24 So I'm not writing off manual tending  
25 whatsoever, because it seems to me, I sense that manual



1 tending has become the horror story of spending lots of  
2 money for nothing, and I agree in many cases, but why  
3 don't we find a really defined line between these two.  
4 It can be done and I can document it. I know it could  
5 be done because it simplified my task to eliminate the  
6 competition.

7 Now, on top of this I would like to say  
8 this, if our aim is to injure trees only; in other  
9 words, to reduce the competition to certain "optimum"  
10 so it doesn't interfere with the growth of the conifer  
11 trees, then you are in different ballgame again because  
12 if you try to injure a tree or kill it outright, then  
13 you have wider options for you.

14 Perhaps our problem is what kind of  
15 interference we desire. What degree of interference we  
16 have got to do to achieve the objective, and here is a  
17 vast area of research which has not even been touched  
18 because we do it mechanically, we say: Okay, we are  
19 going to spray, the option between 24 and the other  
20 chemicals. Well, we assume that we are going to  
21 achieve the objective.

22 But when you go from stand to stand,  
23 which I do, and observe it and see what kind of  
24 reaction you get, you have vast cooperation. It  
25 depends on the crown closure, it depends on the crown

1 of the species you try to eliminate because let's be  
2 clear, chemical is a droplet of things which goes down.  
3 If that droplet falls on the top the of tree, how can  
4 you injure the bottom, the stratas of these trees and  
5 you can see vast variation in the effect of herbicides  
6 used in boreal forests. Sometimes it works well,  
7 sometimes it doesn't work at all. People start  
8 complaining, you are killing my old trees or my public  
9 trees. So you have vast variation.

10 MS. SWENARCHUK: Q. Mr. Marek, is there,  
11 in your view, any relationship between the size of a  
12 cut-over and the likely necessity of herbicide spraying  
13 for chemicals?

14 A. From my experience, yes. The vaster  
15 area you have the more competition you can entice, the  
16 more this problem of site being taken over by other  
17 species and there are various of them. The trembling  
18 aspen or the poplar is one of the most difficult ones  
19 to deal with but, yes, there is because shear size, we  
20 are changing the landscape, we are inviting the problem  
21 of the area being just opened to everything.

22 There are some interesting quotes,  
23 European quotes, which describe the situation of the  
24 maximum aggradation period. In site rehabilitation, if  
25 I may, perhaps that's -- but, you know, when the site

1 is clearcut, especially large area clearcut, you have  
2 all kinds of new systems moving in reacting to this  
3 disturbance. And I think -- the reason I am for and I  
4 - am great advocate of small area clearcuts -- small  
5 clearcut management, which still unknown in this  
6 country, we talk about patch cutting, we talk about  
7 modified cutting, and the reason I talk about -- across  
8 the world, if you go to Germany, they tell you what  
9 small area clearcut management means very clearly and  
10 it's specified in the prescription and so on.

11 Q. On that point, Mr. Marek, do you  
12 advocate the use of modified cutting for species in  
13 addition to black spruce?

14 A. Yes. No. 1, we should realize that  
15 black spruce can be also partially associated with jack  
16 pine and other species. In the interrogatory, I have  
17 noted that people asked me, what do you mean exactly  
18 other species, these different associations.

19 But, yes, I think that I would prescribe  
20 mod -- or small area clearcut management for species  
21 like jack pine on certain conditions; in other words,  
22 when you have a dry jack pine site identified very  
23 quickly by cladenia, cladonia and all these species,  
24 --surely the protection of site, the protection against  
25 rapid drying out, I think that modified cutting is

1 justified.

2 Q. All right. I want to turn now to  
3 Forests for Tomorrow's silvicultural prescriptions.

4 Madam Chair, two additional comments on  
5 these prescriptions.

6 They were draft prescriptions when we  
7 filed them as Exhibit 1416, there are about three very  
8 small changes in them which I will describe to you and  
9 they have been redrafted to that extent, and I have  
10 copies here. Perhaps it would be appropriate to call  
11 them Exhibit 1416A.

12 MR. FREIDIN: Does that mean that these  
13 are the final -- these are the same form as the ones  
14 you are going to file in November?

15 MS. SWENARCHUK: I expect so.

16 MR. FREIDIN: Thank you.

17 MADAM CHAIR: How will we describe these,  
18 Ms. Swenarchuk?

19 MS. SWENARCHUK: You can call them FFT  
20 draft terms and conditions revised silvicultural  
21 prescriptions.

22 MADAM CHAIR: As of this date?

23 MS. SWENARCHUK: Correct.

24 ---EXHIBIT NO. 1416A: FFT draft terms and conditions  
25 revised silvicultural  
prescriptions, dated November 6,



1 1990.

2 MS. SWENARCHUK: My second point, Madam  
3 Chair, is once again, for the service of brevity, if my  
4 friends will permit, I propose not to take Mr. Marek  
5 through every line of the silvicultural prescriptions,  
6 but to specify with him the few areas in it in which he  
7 does not take a position, and then perhaps to ask a  
8 general question with regard to the rest of the  
9 prescriptions.

10 That may sound rather leading, and if my  
11 friends find it unacceptable I am sure we will hear.

12 MS. CRONK: That's fine.

13 MS. SWENARCHUK: Q. Mr. Marek, do you  
14 have...

15 A. (indicating)

16 MADAM CHAIR: Excuse me, Ms. Swenarchuk.  
17 Do you happen to have the date when we exhibited 1416,  
18 Exhibit 1416?

19 MS. SWENARCHUK: I can find it at the  
20 break. I expect it was probably October 2nd, perhaps  
21 October 1st.

22 MADAM CHAIR: Thank you.

23 MS. CRONK: I'm sorry, Madam Chair, what  
24 was it you needed?

25 MADAM CHAIR: October 1st or 2nd, the

1 exhibit date for Exhibit 1416.

2 MS. CRONK: I shall look before I speak.  
3 My copy has no date on it.

4 MADAM CHAIR: Thank you.

5 MS. SWENARCHUK: Q. Mr. Marek, I  
6 understand that you do not wish to express a  
7 professional opinion with regard to species which you  
8 have not managed extensively yourself and, therefore, I  
9 would direct your attention to page 3 of the  
10 silvicultural prescriptions; that is, paragraph 2(1),  
11 and I understand you do not wish to express any comment  
12 with regard to subparagraph (d), which is white pine;  
13 subparagraph (e), which is red pine; subparagraph (g),  
14 white birch; and subparagraph (h), tolerant hardwood  
15 species?

16 A. That's correct.

17 Q. Now, you have reviewed these  
18 prescriptions; have you not, Mr. Marek?

19 A. I did more than that.

20 Q. You helped devise the prescriptions;  
21 did you not, Mr. Marek?

22 A. That is correct.

23 Q. Fine.

24 MS. SWENARCHUK: Madam Chair, I hope  
25 that's of some assistance to you in understanding the

1 relationship between Mr. Marek's evidence and the  
2 silvicultural prescriptions.

3 MADAM CHAIR: That's very clear. Thank  
4 you.

5 THE WITNESS: I do not know about years  
6 past, Madam...

7 MS. SWENARCHUK: Q. And I take it then,  
8 with the exception of those paragraphs that we have just  
9 excluded, you are in agreement with the desirability of  
10 the silvicultural prescriptions?

11 A. Yes.

12 MS. SWENARCHUK: I propose to leave it at  
13 that, Madam Chair. I have no doubt that we will hear  
14 from other lawyers further questioning on it.

15 MADAM CHAIR: That's fine with the Board.

16 THE WITNESS: Madam Counsel --

17 MS. SWENARCHUK: Q. I should have known.

18 A. Yeah. No, no, just to clarify what  
19 we are dealing with, just a few words, I like to go to  
20 the first paragraph on the silvicultural prescription  
21 and meaning of the sentence 1.1 under General - page  
22 No. 1, and this says:

23 "The development and implementation of  
24 silvicultural prescription shall provide  
25 for ecological sustainability of the

1 forest within the area...", and I'm  
2 taking -- it's lots of words there. May I point out  
3 just very briefly what we mean, when we say, by  
4 ecological sustainability of the forest. Very briefly  
5 this means that we are prescribing things which will  
6 relate and, if possible, duplicate if it's possible,  
7 duplicate conditions of the stands which were there  
8 before.

9 We humbly say that we are trying to help  
10 nature to establish something we have before. At this  
11 stage of game or stage of science and knowledge we  
12 have, experience, I think it would be fairly arrogant  
13 from us to say that we are asking more than that. We  
14 may experiment with it, Madam Chair, we can definitely  
15 oppose to the new discovery, how to understand that  
16 nature, but I think the very important aspect of this  
17 thing is to understand, first, how the nature does it  
18 and how can we, with the help of nature, establish  
19 something that resembles what we had before.

20 That's it, Madam Chair.

21 Q. Thank you.

22 MS. SWENARCHUK: I neglected previously,  
23 Madam Chair, to identify for you the changes in this  
24 draft. I'll just do that. If you would look at page  
25 2, subparagraph 2.1(a), Black Spruce Working Group, the



1 third paragraph of that subsection, the last sentence  
2 of that paragraph has been changed. It read  
3 previously:

4 "The last strip shall be harvested only  
5 if the adjacent strips have produced  
6 viable seed."

7 "Have produced viable seed" has been  
8 deleted and the sentence now reads:

9 "The last strip shall be harvested only  
10 if the adjacent strips have been  
11 satisfactorily regenerated to a standard  
12 not less than 80 per cent stocking of  
13 black spruce."

14 The second change occurs on page 4 on  
15 paragraph 2, sub 4 with regard to the FECs, it's an  
16 addition. In the fourth line of the original draft  
17 there was an indication that:

18 "The FECs should be changed to  
19 incorporate information related to the  
20 successional trends and forest floor  
21 changes caused by harvesting." We have  
22 now added to that, "and other disturbances."

23 And the last change is really a  
24 clarification on the fifth page with regard to  
25 paragraph 4, sub 1, Site Preparation on Sites Subject

1 To Prescribed Burn. The previous draft indicated that:  
2 "After a prescribed burn, only light  
3 scarification shall be permitted." The  
4 current draft reads:

5 "Where prescribed burn is conducted,  
6 scarification shall be conducted on the  
7 burnt areas to achieve biological  
8 reactivation of the humus upper stratas."  
9 And those are the changes.

10 MADAM CHAIR: Thank you.

11 MS. SWENARCHUK: Q. Now, Mr. Marek, I  
12 would like to turn our attention to the Code of  
13 Practice for Timber Management Operations in Riparian  
14 Areas. And I have provided copies to other counsel and  
15 I believe copies are available to you, Madam Chair, Mr.  
16 Martel, from Mr. Pascoe. This is Exhibit 434.

17 Do you have the copy, Mr. Marek?

18 A. Oh, it's here someplace, Madam. I  
19 had it this morning. Here it is.

20 Q. Now, Mr. Marek, I take it you have  
21 had an opportunity to the review this Code of Practice?

22 A. Yes.

23 Q. Mr. Marek, is it your view that the  
24 the practices outlined in this Code of Practice reflect  
25 current harvesting practice as you see them in the area

1 of the undertaking?

2 A. Madam counsel, I had some problem  
3 with this by the virtue of really scientific  
4 documentation of this practices. We assume that, for  
5 instance, on the third line there on the (a)  
6 Introduction, third line:

7 "The careful choice and implementation of  
8 harvest and renewal practices as part of  
9 the day-to-day operation will minimize  
10 the occurrence of erosion and potential  
11 for eroded material to enter nearby lakes  
12 and streams and there is sedimentation."

13 I have a problem with this, because it's  
14 a statement which may, I suppose, typify present  
15 practices. We are always careful, we always are  
16 careful, aren't we, to do everything, and I have a  
17 problem with, in view of my presentation with the  
18 slide, I show you, I show you very clearly that many  
19 areas the damage by logging equipment is excessive and  
20 shouldn't have; therefore, the careful choice is not  
21 implemented. If we have a choices to implement, better  
22 check what we are doing in the forest.

23 Now, that pertains to harvest and regular  
24 operation, both of them. I have shown you slides where  
25 harvest, or movement of equipment, movement of wood

1 back and forth cause all kind of problem.

2 Now, if we think or assume that it will  
3 not have an impact, and I am talking about normal  
4 operation, I go back to this magic term normal  
5 operation, what does it mean, what does it represent?

6 If this so-called normal operation are  
7 done in future as they are done now and as I  
8 documented, not all over but in some areas, it will  
9 have an impact not only on the site itself in the area  
10 of the active logging, but it going to have an impact  
11 on neighbouring area.

12 I mean, the ecosystem are inter-related,  
13 we must not here pretend that one type, one forest type  
14 is the type in forest landscape, that type is connected  
15 to uplands, lowlands, other are in the neighbourhood  
16 and the fluxes are important too.

17 So when you are careful, of course, if we  
18 are careful it shouldn't happen, but it's happen all  
19 the time, that there is impact of one system or one  
20 stand on, say, many stands on the neighbourhood. If  
21 that neighbourhood happened to be riparian area,  
22 streams, lakes and so on, obviously there will be  
23 impact.

24 I just like to mention the case of the  
25 Nipigon landslide which occurred north of Nipigon



1 River. The testimony by MNR states very clearly it's  
2 combination of factor, so how will combination of  
3 factor affecting neighbourhood areas under normal  
4 operation.

5 MS. SWENARCHUK: Madam Chair, we will be  
6 referring to the Nipigon landslide later in the  
7 testimony with regard to the Lake Nipigon/Beardmore  
8 Society.

9 THE WITNESS: What the impacts really are  
10 and how can be measured is something we know very  
11 little about, very little about.

12 MS. SWENARCHUK: Q. Mr. Marek, I would  
13 like to direct your attention to the fourth paragraph  
14 of this introduction:

15 "Factors such as soil characteristics,  
16 vegetative cover, season of operation and  
17 equipment should all be considered when  
18 operational decisions are made. It is  
19 realized that since site conditions vary,  
20 some flexibility in using the Code is  
21 necessary. The choice of the operational  
22 practice must also consider equipment  
23 availability, safety factors, economics  
24 and environmental concerns not directly  
25 related to water quality."

1                   A. Are directed or are they not  
2     directed, is that what you are pointing out? I think  
3     one of the things that they are, they are  
4     interconnected and, therefore, they play very important  
5     role.

6                   Q. Are you persuaded that -- are you of  
7     the view that the factors outlined in the first  
8     sentence of this paragraph currently are considered  
9     when operational decisions are made?

10                  A. Not according what I have presented  
11     too, Madam Chair, if you have seen the slides obviously  
12     you have seen some of the problem in these normal  
13     operations, and if these normal operations, to what  
14     degree this operation going to have an impact on these  
15     sensitive area of riparians is something I can't say  
16     there because the water is moving through the whole  
17     system, the nutrients are moving through the whole  
18     system, the negative impact could show by erosion  
19     mostly, and it doesn't have to be just gouging, there's  
20     water moisture percolating through the system leading  
21     from one system to the other and affecting accordingly.

22                  So when somebody say, for instance, Madam  
23     Chair, we are going to leave three metres of green  
24     vegetation along the stream --

25                  Q. You are referring to one of the

1       pararaphs of this Code there; are you not, Mr. Marek?

2                   A. No, it doesn't make any difference,  
3       forget about these three metres. If we leave anything  
4       around the stream as protection from these impact of  
5       the neighbouring ecosystem, it would be wise, very wise  
6       to know approximately what the impact would be by  
7       measuring these things, by really, say, examine the  
8       horizon of the soil deep into the system itself, deep  
9       into the cut-over area, you will not just measure  
10      nitrogen input into the stream, you are going to  
11      probably find out, as research documented already, that  
12      these ecosystems are interchangeable in the nutrients  
13      values and so on, so you are going to have an impact in  
14      many ways, it's not only nitrogen which makes a problem  
15      in the rivers, streams and so on, it's other nutrients  
16      also.

17                   So I have to see as yet, have some kind  
18      of documentation which will say something like this: On  
19      such and such an area, such a soil profile, such a  
20      fairly good description, here is the proof that certain  
21      nutrients and certain impact occur in the riparian  
22      area.

23                   It's not here. We are talking, we can be  
24      careful, we are going to be conscious of these things,  
25      but how we going to measure these things. The normal

1 operations so far are telling me that this kind of  
2 preventive measures are strictly guesses, a guess. We  
3 going to leave 150 foot undisturbed condition along the  
4 river or wherever.

5 Then question, of course, immediately  
6 appears in front of me there: Is that enough, or is  
7 that too little? Do we really understand what we are  
8 talking about?

9 See, one of the problem with logging on  
10 the normal operation is that the impact of equipment  
11 may be positive, may be negative, but in case if it's  
12 negative we have to look for better equipment to serve  
13 these areas and not disturb it to the degree so it  
14 impacts the riparian areas. We need the equipment, we  
15 need better equipment to log in these sensitive areas,  
16 "sensitive" areas where this damage may occur.

17 We know very well that many equipment we  
18 are using right now do not serve this purpose. Just  
19 today they cause problems certain time of the year,  
20 very similar problems, so we have to look for equipment  
21 to minimize these damages and I don't see too much  
22 going on on this problem.

23 MADAM CHAIR: Excuse me, Mr. Marek.

24 THE WITNESS: Yes.

25 MADAM CHAIR: In your 160 slides I don't



1 remember seeing a waterbody, it may have been there,  
2 but the problem you are talking about now is not the  
3 eroded sediment problem into open waterbodies, you are  
4 talking about the transport of nutrients into the water  
5 table or possibly some distant surface runoff--

6 THE WITNESS: That's right.

7 MADAM CHAIR: --into water bodies?

8 THE WITNESS: Well, very much -- Madam, I  
9 didn't want to complicate my slide presentation to go  
10 into this kind of problem and I think it's very  
11 important problem for very specific reasons.

12 Can we afford more acidity pumping into  
13 our lakes, how is that? Again, everybody is  
14 complaining about acidity and there's lots of acid  
15 rain. Matter of fact one of these researchers, many  
16 researchers in United States feel that the whole  
17 problem of acid is an input of boreal forest to the  
18 stream high acidity, Mr. Reagan is.

19 MS. SWENARCHUK: Q. Mr. Marek, I want to  
20 bring you back to the fourth paragraph on the first  
21 page and the reference to equipment availability and  
22 operational practices in riparian areas.

23 Have you observed any problems with  
24 regard to the types of equipment used by operators in  
25 riparian areas?

1                   A. I just repeat what I said before,  
2       Madam, that in many instances we are using equipment in  
3       riparian areas or riparian area which is not suitable  
4       for these operations and should be definitely improved  
5       in order to justify some kind of careful choices, and  
6       so what's stated in this statement here.

7                   Q. Would you look at page 4, please.  
8       This is -- and section 4 has to do with equipment.

9                   A. Yes.

10                  Q. And the third paragraph on that page  
11       reads as follows, from the beginning:

12                   "The selection of equipment and systems  
13                   is based on local site conditions. If  
14                   the appropriate machinery is not  
15                   available at the stipulated time of year  
16                   for the existing terrain conditions, or  
17                   should operations become too costly--"

18                  A. Yeah.

19                  Q. "--a decision not to permit  
20                   operations or to postpone them shall be  
21                   taken."

22                  Now, in your experience in the operations  
23       you have observed, is this the practice?

24                  A. Well, there are all kind of  
25       compromises here, Madam Chair, but it seems to me that

1 this become too costly is a problem most criteria  
2 concern, when it become costly you cannot operate this  
3 area, you put poor plant sucker or poor third party  
4 operator there and he's got one skidder or he's got a  
5 very limited choice of equipment, well, you are going  
6 to shut him down and say, that it's, out of bounds.

7 And I think the district staff, the field  
8 staff of MNR and, for that matter, Industry has a  
9 really problem to consider. The Industry sometimes do  
10 this, they just say: Well, we won't operate, let some  
11 other sucker do that for us, thus exposing him to these  
12 kind of complaints because people complain about  
13 erosion and damage of banks and so on. So well, let's  
14 put the operator in there, a third party, and he can do  
15 it, but the company can't afford it.

16 I have seen that many times, Madam Chair.  
17 Well, the availability of equipment is a crucial  
18 factor. If we are going to allow careful operation in  
19 riparian area we have to supply equipment or have  
20 equipment at hand which is able to achieve these goals  
21 and presently I just don't see it.

22 I'm sorry, maybe there are some example  
23 in Ontario in boreal forest, matter of fact, in  
24 southern forests where this operator can do a better  
25 job, but overall the so-called normal operation in a

1 sensitive areas, it just means the old system of  
2 operating with these old careful connotations.

3 Q. Now, moving down the page, paragraph  
4 five lists a number of specific practices to be  
5 followed. I would like you to turn your attention to  
6 subparagraph (b) which says:

7 "No logging debris is to be left on the  
8 banks of streams, rivers or lakes."

9 In your observation, is logging debris  
10 left on the banks?

11 A. Yes, there are sometimes, they are  
12 not because, as you know, we are full-tree operation so  
13 lots of that stuff is moved away from there and become  
14 part of the pile of slash, piled along the main road  
15 there or along the road system.

16 What bothers me about this statement is  
17 very simple, this:

18 "No logging debris is to be left on the  
19 banks of streams and rivers and lakes."

20 Now, Madam Chair, is that really true,  
21 that no logging debris should be left with the  
22 connotation that it will be harmful. Maybe some time  
23 it's a good thing to leave the debris - and I am not  
24 talking about whole-tree length and I am not talking  
25 about logs all over the country - what I am talking



1 about debris concern as pine branches, needles and all  
2 these things which obviously may have an impact on the  
3 site productivity and rejuvenation or rebuild-up of the  
4 thing.

5                   So no logging debris to be left on the  
6 banks of streams, rivers and lakes. Now, that's a very  
7 definite thing which should be probably qualified, and  
8 in cases like where the banks of the stream may have  
9 some debris left in order to minimize the damage done  
10 or the removal of the total biomass from the site, it  
11 doesn't make sense.

12                   I think it's very important fact to say:  
13 Look, there are certain nuances here, there are certain  
14 exceptions here where perhaps the slash, representing  
15 needles and small branches, not the whole trees of  
16 course or something which is as big as that, will serve  
17 useful purpose for silviculture, for maintenance of  
18 site productivity.

19                   The other thing I like to say here is  
20 this, dealing with this issue for many years, Madam  
21 Chair, and chasing the operators by dropping trees in  
22 the rivers and all kind of messy affairs along this  
23 riparian areas, after longer time span I have  
24 discovered that many of these operation around rivers  
25 is conducted really properly, fine-tuned to the small

1 cuttings, small operations or things like that, may  
2 serve very useful purpose.

3 I just bringing in here saying the same  
4 time that we should not create mess there and we  
5 shouldn't do very drastic, but there are certain  
6 elements which perhaps should be examined.

7 Q. Paragraph (d) of section 5, Mr.  
8 Marek:

9 "Equipment is not to travel within  
10 streams or rivers during harvest or  
11 renewal operations, so as to cause damage  
12 to banks or beds. Stream crossings are  
13 to be kept to an absolute minimum."

14 Now, in your observation, have you  
15 observed equipment travel within streams or rivers  
16 causing damage to banks or beds?

17 A. Again, Madam Chair, this is so  
18 site-specific and so case-specific it should be judged  
19 by its own merits, by the intelligence of manager who  
20 will allow or not allow to cross.

21 One of the perhaps problem I see in  
22 crossing of large equipment any stream, that you going  
23 to have some residue of oils and dirt from the machines  
24 drop in and be washed out in the river stream. Don't  
25 forget our equipment are full of hoses, hydraulics,

1 fluids, grease and everything, it's big equipment, and  
2 once -- even skidders, and they travel of course  
3 through the stream there's, you know, that stuff is  
4 getting washed off into the river and goes down the  
5 river.

6 I have seen cases of that nature, but I  
7 think that common sense is to do it so discreetly so  
8 that you will not just travel back and forth from one  
9 bank to the other for no purpose. I think nobody would  
10 like to get in the river.

11 So, again, this is matter of judgment and  
12 I think that while the paragraph state that there are  
13 certain policy not to move equipment, I think this  
14 sometimes is necessary and I think perhaps precaution  
15 should be taken not to spill or open the hoses for  
16 hydraulics into the rivers.

17 Q. The next page at the top, page 5, Mr.  
18 Marek, is where we see the reference to:

19 "Leaving a narrow filter strip of  
20 approximately thre metres of undisturbed  
21 forest floor vegetation on the banks of  
22 waterbodies except where necessary to  
23 cross a stream."

24 A. Mm-hmm.

25 Q. Do you agree with that prescription?

1                   A. Well, I just like to see the specific  
2                   situation the site condition and so on but, you know,  
3                   when somebody says three metres, this is a general item  
4                   which I cannot accept, three metres, what kind of  
5                   condition, three metres. I think three metres is from  
6                   here to over there, so if you leave three metres of  
7                   vegetation there which again may vary, all kind of  
8                   different vegetation, we have alder swamp, we have  
9                   alder slues, we have a big tree standing there, we have  
10                  all kind of condition and all kind also is the  
11                  condition of the ground itself, if it's material which  
12                  can be moved very quickly by erosion or by general  
13                  impact, then I don't see three metre, what does that  
14                  mean?

15                 Well, the fact that they are stipulating  
16                 rigid three metres is a kind of good precautionary  
17                 measure necessary, no, I just cannot buy it.

18                 Q. Now, the next --

19                 A. In some cases possible, I don't know.

20                 Q. Now, the next paragraph -- excuse me,  
21                 paragraph (c) down the page talks about implementation.  
22                 I would like to give you an opportunity to read that  
23                 paragraph again, Mr. Marek, and then I have some  
24                 questions to ask you about it.

25                 A. You are asking me.



1 Q. Yes. I am giving you the opportunity  
2 to read the paragraph again before I ask you some  
3 questions.

4 A. Is that indentation paragraph (c)?

5 Q. Exactly, yes.

6 A. Okay. Responsibility for  
7 implementation co-rests with the Industry or Crown  
8 forestry staff.

9 Well, again, the responsibility, in the  
10 case of Crown it will be the local area forester.  
11 While the forester may prescribe, he is management  
12 planner, he's the man who is responsible for all of  
13 these things, I think --

14 Q. I want to ask you about the seventh  
15 line of the paragraph:

16 "The forester and the equipment operator  
17 must jointly carry out the operations in  
18 riparian areas so as to protect water  
19 quality."

20 A. Well, Madam Chair, this unfortunately  
21 makes little sense to me as forester, because I have  
22 more important things to do than stay with bulldozer  
23 operator or with a machine operator to watch him  
24 crossing the stream or whatever.

25 No, I think this term of responsibility,

1 means that the forester indeed going to plan and, I  
2 suppose, be responsible, but when you would ask a  
3 forester and the equipment operator must jointly carry  
4 out the operation, what you mean, the forester is  
5 standing all the time and see that bulldozer operator  
6 crossing -- it's doesn't make sense to me. I think we  
7 should have enough responsible staff foremans and, I  
8 suppose, company foreman should be there obviously, but  
9 when you talk about forester being involved to cross  
10 the bulldozer, and hold his hand and tell him here you  
11 got to stop and here you got to go.

12 So let's take it as something perhaps  
13 fellow who wrote this cannot visualize that the  
14 forester's duties are somewhat of higher level and  
15 perhaps he should have a foreman or somebody in charge  
16 of the operation right on the ground who going to say  
17 this, perhaps you do this or that. I just cannot see  
18 forester being involved in it.

19 Not that I didn't do it, I stop operators  
20 many times by accident when I come there and I saw them  
21 doing something. I said: Hold horses. But then you  
22 should have one problem, that the operator going to  
23 turn to you and say: Who the hell are you telling me  
24 not to do this, not to do that. I have my echelon of  
25 bureaucrats and foremans and, I don't know, tell me who

1 are you?

2 I have seen very weakening position when  
3 Ministry present there even now when the Industry is  
4 fully responsible for many of these things where the  
5 technician of MNR or the forester even, if we have a  
6 forester there saying, I am a forester, I going to  
7 forbid you to do this.

8 I think the many companies would object  
9 to it, Madam Chair. We would say: Well, look, this is  
10 our responsibility, we have a forest management  
11 agreement which stipulates certain things.

12 Q. On exactly that point, Mr. Marek,  
13 could we look at the next paragraph on monitoring and  
14 enforcement. The first sentence reads:

15 "Practices in riparian areas will be  
16 monitored regularly for compliance by the  
17 area inspector as part of the inspection  
18 of harvest and renewal operations."

19 Now, who in your opinion is the area  
20 inspector?

21 A. Well, the fellow will put charge is  
22 going to be a CO, conservatin officer in the service of  
23 the Ministry. He usually is the one who enforces these  
24 things and go to the courts because he's got a badge  
25 and he's sworn and, you know, he's a conservation

1 officer.

2 Now, they don't say here that, but it is,  
3 because in many cases I have followed up and I have  
4 dealt with as a consultant, the question always was put  
5 to me, more or less: Now, this fellow doesn't know  
6 this, and he doesn't know, how he can do this, and so  
7 on. So if you are a policeman -- well, the CO is  
8 policeman now in many operations and he is enforcing  
9 some of these things. I object to it strongly.

10 Q. Who do you think should be conducting  
11 the monitoring enforcement of the timber practices?

12 A. The forester in charge. It should be  
13 a forester who directs and is responsible for the  
14 operation, he should do it, it should be nobody else  
15 but him.

16 And, again, Madam Chair, here we are in a  
17 conflict with some of those goals and objectives of  
18 foresters and it bothers me as a forester very much  
19 that I shouldn't have the privilege, right and  
20 responsibility to act in that frame of the law.

21 I don't want the CO, conservation officer  
22 to do that. The conversation officer is the man who  
23 looks out for those poaching pickerel or seeing if  
24 there is an act damage that contravene the laws, and  
25 there are certain riparian areas. No, I think it is



1 caused by timber operation and it should be repaired by  
2 timber operation.

3 MR. MARTEL: How can he do this? He is  
4 not trained as a conservation officer, he is trained in  
5 applying rules and regulations and getting people that  
6 are poaching, et cetera. How he can determine what is  
7 a good forestry practice or not? I mean, that's not  
8 his responsibility. That's not in his training, is it,  
9 to your knowledge?

10 THE WITNESS: Good, you said to my  
11 knowledge. Yes, I agree with you fully. I don't think  
12 the conservation officer has the duty. More  
13 importantly than that -- and I don't want to take any  
14 responsibility of people who are in uniform and who are  
15 policemen, all the power to them, but concentrate on  
16 things which is your line of education, your line of  
17 professional duties, so let them put law in the proper  
18 places.

19 This is something that should be done by  
20 trained professionals who cannot only see these but  
21 visualize them ahead. Do you know what I mean?  
22 Visually ahead and plan for them. Here is the area I  
23 am involved with, here is the problem, let's deal with  
24 it, let's do it and then if the infraction occurs,  
25 Madam Chair, he should be man who testifies and enacts

1 the law.

2 MADAM CHAIR: The management forester?

3 THE WITNESS: It is the management  
4 forester who is responsible for the implementation of  
5 the timber management -- or forest management plan.

6 MADAM CHAIR: I think you and all the  
7 other witnesses have established that management  
8 foresters are very busy people, they have lots and lots  
9 of things to do.

10 THE WITNESS: Always.

11 MADAM CHAIR: With respect to being  
12 informed about infractions or day-to-day operational  
13 problems, do you think that management foresters in  
14 many cases can respond anymore quickly than the  
15 reviewer for issuing annual cutting licences, for  
16 example?

17 I mean, is there anything he can do on a  
18 day-to-day basis as opposed to larger periods of time  
19 that they can review what's happened and take some  
20 action?

21 THE WITNESS: It's a matter of  
22 cooperation and teamwork between staff of MNR and, for  
23 that matter, staff of the corporation operators.

24 What I think should be done is this,  
25 Madam Chair, I think that we should have a skilled

1 technical force who supervises the field operations,  
2 goes into the field, he makes cut inspections, that has  
3 been discussed, and moose: I can't cut here, and in  
4 the cut inspection he notices an infraction.

5 He immediately contacts the operator and  
6 says: Look, you are trespassing or you are doing this  
7 and that. He goes to the management forester and says:  
8 Look, this is happening, I need your advice, let's  
9 take -- he probably has to go in the field, put the  
10 rubber boots on and go in the field. It doesn't take  
11 very long. He can do it quickly and lay charges or  
12 proceed with the implementation of correction.

13 MADAM CHAIR: So it's a forest technician  
14 who can be the eyes and ears of the management  
15 forester--

16 THE WITNESS: That's right.

17 MADAM CHAIR: --in the initial detection  
18 of problems?

19 THE WITNESS: That's correct. We have to  
20 have trained people who go to the field, notice these  
21 things, getting paid for it, and then goes to the  
22 management forester. Again, I am choosing this  
23 management forester all the time because I feel very  
24 strongly that timber -- or a forest management plan is  
25 the basis to work with and to do anything, if it has

1 any meaning. Let's make it an efficient document for  
2 everybody and at least try to respect it.

3 So, yes, I agree that under the present  
4 condition, Mr. Martel, it is difficult because it's not  
5 a proper arrangement on how to mitigate, how to resolve  
6 this problem. As people we are not doing an efficient  
7 job and MNR is to be blame for it because they should  
8 be doing it.

9 MADAM CHAIR: Shall we take our afternoon  
10 break.

11 ---Recess taken at 2:45 p.m.

12 ---On resuming at 3:10 p.m.

13 MADAM CHAIR: Please be be seated.

14 MS. SWENARCHUK: Madam Chair, Mr. Huff's  
15 diligent research has identified that Exhibit 1416 was  
16 filed on October 9th, which was hearing day 242.

17 MADAM CHAIR: Thank you.

18 MS. SWENARCHUK: Q. Now, our only  
19 remaining testimony with regard to the witness  
20 statement for Forests for Tomorrow has to do with the  
21 questions originally asked by the Board in the scoping  
22 session and you didn't have those questions available  
23 to you.

24 MADAM CHAIR: I think some of those  
25 questions certainly have been answered in great detail



1 by Mr. Marek.

2 MS. SWENARCHUK: Yes. Perhaps what I  
3 will do, Madam Chair, is read the question, ask you if  
4 you require a further answer and only for those that  
5 you do will I put to Mr. Marek.

6 MADAM CHAIR: That's fine.

7 MS. SWENARCHUK: The first question is,  
8 is Mr. Marek's recommendation that small area clearcut  
9 management are for all species and areas or just black  
10 spruce in the Nipigon District and Clay Belt.

11 MADAM CHAIR: Mr. Marek has covered that.

12 MS. SWENARCHUK: Then his pessimism  
13 regarding second growth. Is that pessimism focused on  
14 the area around Lake Nipigon or does this concern the  
15 entire area of the undertaking?

16 MADAM CHAIR: He has answered that.

17 MS. SWENARCHUK: That with regard to his  
18 proposals for small area clearcut management, is he  
19 recommending that the government increase road funding  
20 to facilitate small clearcuts.

21 MADAM CHAIR: I don't think Mr. Marek  
22 said very much about roads or road funding.

23 THE WITNESS: Would you like me to  
24 elaborate?

25 MADAM CHAIR: If you have an opinion.

1 THE WITNESS: Yes, I do.

2 I think this question came up by Mr.  
3 Martel yesterday or the day before. Yes, but I think  
4 that it's important to realize the constraints and some  
5 of the difficulties of adjustment to the small area  
6 clearcut management.

7 One of them, of course, is additional  
8 access, maintain the access. As you probably know, we  
9 have to go back to harvest the remainder of the stands,  
10 and especially when you prescribe more elaborate  
11 treatment of the stands by cutting in different --  
12 different times for cuttings and removal of the stands.

13 This has been discussed many times in the  
14 past with company people. In fact we had a seminar in  
15 Thunder Bay in the 70's that dealt with that issue of  
16 extra operating cost and immediately the extremes, the  
17 extremes were obvious. There were voices of the  
18 company people who said: I have to have additional  
19 four bulldozers to operate. Of course, we really need  
20 four additional bulldozers; in other words, investment  
21 at the time was half a million dollars. The other one  
22 of course is, don't pay them anything they have to do,  
23 it's part of the removal of the forest. So there are  
24 two extremes, obviously.

25 My policy was affected by the fact of

1 implementation of forest renewal being done in a  
2 qualitative way; in other words, quality has got to be  
3 No. 1 because if you do not put quality in practice,  
4 the question is what kind of quality are you going to  
5 get in return. If you say quality is not important and  
6 you don't plant properly and do not execute properly  
7 the prescription in forestry, what kind of return are  
8 you going to get.

9 So my view and for a while the  
10 government's view was that indeed because there are  
11 some extra expenses necessary or extra money in order  
12 to do it qualitatively, properly so you get results you  
13 expect, you will have to consider this extra support,  
14 financial support.

15 It was my experience that, and this is my  
16 own case, Madam Chair, that if I didn't get involved  
17 with some of the implementation and supervise it  
18 properly, which again perhaps not -- that was not my  
19 role, but I was anxious to get good results or my  
20 supervisor or my involvement was absolutely necessary  
21 and in a moment that I said: Well, let somebody else  
22 do it or don't just prescribe it and let them implement  
23 it, immediately I have found that the quality of work  
24 was not done the way I wanted it and that's when I  
25 said: What is the role of Ministry or what is the role

1 of government in implementation of programs under  
2 contractual agreement, like FMA. Do we really get the  
3 quality we want.

4 I have found there was quite a  
5 controversy, quite a difference of opinion who says:  
6 Why should I supervise, duplicate your work, they do it  
7 well and they do it properly. They don't do it  
8 properly and here come the standards of performance.

9 At that time, I said: Okay, I'm going to  
10 pay for that performance. I'm going to pay for that  
11 quality performance which -- in other words, I'm going  
12 to have the final say. I'm going to say as a forest  
13 manager, because I felt responsible for that area, I  
14 felt that it was my duty as a civil servant to have the  
15 best done -- I said: It requires my supervision, it  
16 requires my involvement and government should pay for  
17 it.

18 So this price was established at that  
19 time and we were paying a certain amount of money for  
20 so many acres or so many -- it can be by area or cubic  
21 metres or value, and that's why I say certain things  
22 have to be paid for if you want performance.

23 Well, that's it. I'm basing my  
24 experience on the fact that ultimately the government  
25 is responsible for our forest estate, regardless what



1 contractual agreement you may agree or disagree with  
2 the company or the operators, whoever they may be.  
3 They are in the business of pulp production, they are  
4 in the business of paper making, but the ultimate  
5 responsibility for the management is the government and  
6 if one forgets this element, one may expose the forest  
7 with all kind of little problems, not adhering to the  
8 quality, and I was ready to pay for that.

9 MADAM CHAIR: Is that still your view,  
10 Mr. Marek?

11 THE WITNESS: I don't know what the  
12 policy is now. I don't think they pay for anything.  
13 Since the management agreements were signed and certain  
14 prerequisites or ground rules were put in it, no, the  
15 company is not --

16 MS. SWENARCHUK: Mr. Marek, I believe the  
17 question is: Does it remain your view that these  
18 additional costs for modified cutting should be  
19 subsidized?

20 THE WITNESS: I said right now it should  
21 be subsidized and I did it in order to get the  
22 performance you wish for.

23 MADAM CHAIR: Today you would do the same  
24 thing? If you were in that position and there was a  
25 change towards modified clearcutting and there was a

1 convincing case of increased costs, you would see  
2 government subsidies --

3 THE WITNESS: Don't call it subsidies.  
4 This is nothing to do with subsidies, this is renewal  
5 process we all have to pay for to get forests again,  
6 proper forests again, not junk.

7 MS. SWENARCHUK: Q. The second part of  
8 the question from the Board originally was: If you so  
9 recommend; that is, you recommend the Board use the  
10 term subsidization of these costs, would you say that  
11 this money for increased roads means less money overall  
12 on artificial regeneration or regeneration options  
13 which, I think the question says, would not then be  
14 required to the same extent.

15 Mr. Martel, is that the correct --

16 MR. MARTEL: I would like to just  
17 simplify, if I can. What is the real reason, what is  
18 the reason that we move to larger and larger clearcuts?

19 We cut back some in the last number of  
20 years, but nonetheless it's contiguous and all this  
21 nonsense that we have heard over and over again. What  
22 is the bottom line in trying to get to larger cuts or  
23 getting the fiber if we have moved away from  
24 subsidizing roads?

25 Maybe the answer is reversing it, trying

1 to get into touch, starting to subsidize roads because  
2 everybody uses them, the public uses them, the hunters  
3 use them, the fishermen use them, and if we were to  
4 move in that direction, which will help Industry  
5 significantly in terms of road costs, would they then  
6 cut back on the size of clearcuts and plan more  
7 appropriately for all the activities, all the other  
8 activities in the forest?

9                   Somehow there has got to be some way of  
10 managing all of this, and is that the route to go?

11                   THE WITNESS: Madam Chair, I would like  
12 to add something to this. Surely --

13                   MADAM CHAIR: That was a question, Mr.  
14 Marek.

15                   THE WITNESS: On the public lands, on the  
16 public roads, financed by government, I think the  
17 subsidy somehow for silviculture practices is a very  
18 important one. As I said, it's the quality. You can  
19 build roads, build poor road, build good roads. Is  
20 there any sort of standard.

21                   In the case of modified cutting or small  
22 area clearcut management, it's important we keep the  
23 perspective on renewal, total renewal. I don't think  
24 we should cut on any funding. As a matter of fact, we  
25 should, in fact, have funding in general to the forest

1 management. That hopefully answers your question.

2 MS. SWENARCHUK: Which is their question.

3 THE WITNESS: Oh, your question.

4 No, we are underfunded in forestry and  
5 has been underfunded for years and years and years and  
6 we should start putting more money regardless how we  
7 manage. It's essential. We are talking about the  
8 renewal of our forest to kind of standards which we can  
9 be proud off.

10 I think that underfunding is obvious,  
11 Madam Chair, so regardless if you clearcut or small  
12 clearcut, if you do modified cutting, I think this way,  
13 Madam Chair, we would probably increase the size of  
14 modified cutting considerably because there will be  
15 incentive and that incentive in our society is a very  
16 important aspect.

17 So if we get into smaller area clearcut  
18 management, I would say that we will probably go to say  
19 2, 3, 4 per cent or something like that. What it is  
20 right now? I think over 20 per cent of the total area  
21 is being treated that way for regeneration and we  
22 should probably have it at 50 per cent.

23 MR. MARTEL: Let me take it very short.  
24 What is the real reason for larger clearcuts?

25 THE WITNESS: The real reason?



1                   MR. MARTEL: The real reason. Why are we  
2 getting clearcuts going from 130 to 260 and so on, in  
3 your opinion?

4                   THE WITNESS: It's a matter of economics,  
5 strictly a matter of economics. Our society is  
6 producing all kinds of equipment for harvesting, but  
7 little for regeneration. That's obvious to all of us.

8                   We invent all kind of equipment to  
9 satisfy the extraction, but renewal is No. 2. We are  
10 still planting trees to go here and there, perhaps we  
11 should have better technology. We are not investing  
12 money into that, and thirdly is the convenience.

13                  Madam Chair, what is simpler, what is the  
14 simpler way to get forests harvested than start from  
15 here, close to the mill, which we have done for, what,  
16 hundred years and then go farther and farther up and  
17 farther up and farther up until Hudson Bay and then  
18 say: Oh, gosh, let's look back at what we got there.

19                  So there is the simplicity. It is so  
20 simple to clearcut and start over and what is more  
21 simpler, Madam Chair, than go and plan the trees.  
22 That's the simplest thing everybody -- again, I'm not  
23 talking about quality, but anybody can put a tree into  
24 a hole and say: Look, here is our future. That's  
25 simple. So simplicity is the other aspect, as I

1 mentioned to you, Mr. Martel.

2 So is the economics the primary motive.

3 I think the economics and the models and modeling done  
4 all the time, it's the cheapest more convenient way to  
5 harvest resources and then say: Okay, what are we  
6 going to do with that area clearcut. Let's put some  
7 trees in it and plant it. Simple.

8 The wish, of course, the wish is  
9 thinking that these trees will survive and are going to  
10 produce something similar or better than what we had  
11 before.

12 MADAM CHAIR: Thank you, Mr. Marek.

13 Ms. Swenarchuk?

14 MS. SWENARCHUK: Mr. Martel, are you  
15 satisfied? I just want to say that the economics of  
16 the various approaches will be discussed further in our  
17 fifth and seventh witness panels.

18 Q. The next question I think is an issue  
19 that Mr. Marek has not referred to at all in his direct  
20 testimony and that was a question from the Board, Mr.  
21 Marek with regard to the timber management process.  
22 Are you proposing the abolition of open houses?

23 THE WITNESS: No, I don't think so. I  
24 think open houses are sincerely a very important  
25 channel for communicating with the public. I obviously

1 have been part of many open houses in northern Ontario  
2 and listened to both sides. I have listened to  
3 Industry, I have listened to government and, of course,  
4 as a consultant I have listened to the public also.

5 So no, public houses, probably will be  
6 around for many years to come. What I am about is the  
7 the way -- the kind of quality. Again, we go back to  
8 quality, Madam Chair. The quality of open houses  
9 itself, the communication we do. I have often stated  
10 at many meetings and lectures that forestry is very  
11 much, very much people oriented and it has to be.

12 Forestry generally, the public has got to  
13 get involved in public forestry because it is so  
14 important for the county, it's important for our well  
15 being, future and so on. The public statement, the  
16 public -- the open houses I have witnessed so far, one  
17 of the drawback was that actually MNR and, for that  
18 matter, Industry didn't establish these open, genuine  
19 and sincere contacts.

20 I have -- on many occasions I witnessed  
21 four scenarios. Here comes the open house and haul  
22 these maps and all people are standing there for hours  
23 drinking coffee and then somebody comes in, the trapper  
24 comes in, and George Marek comes in and so many other  
25 people and say: Okay, what's new now, and the MNR

1 people or the company people go over the area which is  
2 coloured and on the map and show roads and so on and  
3 then comes a specific...

4 So many people want to know whether there  
5 will be herbicide spray or whether there will be  
6 crossing on the bridge and so.

7 In general terms I think the vital  
8 information has been always missing and that is,  
9 convince the public beyond his personal interest,  
10 beyond his person involvement with this little problem  
11 with his cabin, with this little problem of access,  
12 with this little problem dealing with -- are you going  
13 to leave the bridge or the roads there or are you going  
14 to take it out. Always this kind of very subjective  
15 personal thing.

16 Many times people are satisfied, in many  
17 cases they are not satisfied, and I think what public  
18 houses really are missing is the trust and the  
19 confidence and credibility and I would say the basic  
20 element of communication and that is that you and I  
21 trust each other.

22 We have developed a syndrome on this  
23 public hearing where people go in and say: I know they  
24 are going to tell us all kinds of stuff, I don't  
25 believe it anyway, they don't do what I want and this



1 kind of thing is right through the whole process.

2 There are some confrontations, but the  
3 general feeling persists, Madam Chair, that the  
4 information public is getting is not full of truth,  
5 only truth. There is lots of manipulation there.

6 The other thing is that: Look, and  
7 quote: How long are you here? Well, I just got  
8 transferred and so. Well, I am here for 40 years, I  
9 know better than you do and you are telling me that  
10 this is a fact, you are telling me this is a fact. So  
11 that leads to confrontation, that leads to the fellow  
12 needs -- they haven't got any experience. More uproar,  
13 in the first place, between each other. They should at  
14 least tell everybody in the public and to me, you know,  
15 how this is with the government and so on. So this is  
16 missing.

17 MS. SWENARCHUK: Q. The next question  
18 has to do with problems of seedling quality and you  
19 recall where Mr. Marek in his witness statement between  
20 pages 44 and 47 has a section on problems of seedling  
21 quality, and the question from the Board was that the  
22 evidence before the Board is that the seedling quality  
23 has improved and what then is your position with regard  
24 to seedling quality at this time.

25 A. Well, you expressed it as well. It's

1 a problem of quality again, where I think we should put  
2 better quality seedling in the forest, probably we  
3 could handled it better, we can watch it better, but in  
4 general I think the quality improved somehow in some  
5 places, but if we are going to depend on reforestation  
6 on regeneration, we surely should improve the quality  
7 of our trees in the nursery or in the greenhouses or  
8 wherever they may come from, and I do believe to start  
9 a new forest with poor quality, poor root system or  
10 poor this is poor forestry practices. I think there is  
11 a large field of improvement.

12 Q. And how do you recommend that the  
13 seedling quality be improved?

14 A. Well, interestingly I was involved in  
15 this many years back and I am still looking for some of  
16 these answers because if research has been done, Madam  
17 Chair, if really intensive research and contract and  
18 investigation in seedling quality parameters of, you  
19 know, quality itself; in other words how tall, what the  
20 root system is like, that has been nursery production.

21 We have researched that field since I  
22 remember, since I came in this country, 1950. I never  
23 have seen so much research and researchers be involved  
24 in the quality of seed. We know about pressures, we  
25 are talking about all kinds of competent things, and

1 when you look in the ground, when you look in the site  
2 and see these seedlings coming up, I doubt that this  
3 research hurt us very much.

4 When FMA embark on this very complex FMA  
5 agreement, they said: We guarantee you certain  
6 products, we guarantee you, as far as Ministry is  
7 concerned, certain quality. First thing what's  
8 happened the quality was not there.

9 I started explaining as member of the  
10 MNR, that time Industry came to me and said: This is  
11 not what you produced, this is not what we thought you  
12 were going to give us, and this is carrying on, this  
13 is --

14 Q. Again, Mr. Marek, how in your view  
15 could the seedling quality be improved, if you think we  
16 are in a position to make recommendations on that?

17 A. Well, how it could be done? I just  
18 said that research has been conducted, surely we should  
19 know what the ideal stock should be for certain areas;  
20 in other words, for certain areas we can have this kind  
21 of stock, for certain areas again very site-specific,  
22 species specific and so on, and I think it's time that  
23 we grabbed the bull by the horn and going to say:  
24 Okay.

25 This year's work, Madam Chair, one

1 program we are having, we are having, it's a serious  
2 problem to satisfy the manager in the field. As you  
3 know, I feel very strongly the forest manager or  
4 responsible person who conduct the forest renewal and  
5 harvesting got to have a choice to say I need such and  
6 such a stock.

7 I fought this battle for years and years  
8 where I went to the nursery and says: You provide me  
9 the kind of stock I need to fully implement and  
10 qualitatively implement demands for forest renewal. I  
11 got it for many years, but when we all of a sudden - I  
12 am talking MNR - when we embark on this vast  
13 regeneration program, increasing the stock production,  
14 immediately the quality problem started and these  
15 people told me: Sorry, George, you cannot get it. And  
16 I says: Why can't I get it? Because I have orders  
17 that we going to get in this line of production and  
18 forget about your trees you were planting yesterday or  
19 last year or 10 years ago, forget it, this is what you  
20 are going to get and if you like it or not you put it  
21 in the field.

22 And that is completely unsatisfactory,  
23 and I think something should be done about it, where  
24 the forest manager, not the bureaucrat in Toronto  
25 decide. I know it's going complicate the production, I



1 know it even may complicate the quantities we can put  
2 on the market into the production in the field to  
3 plant, but it has to be done because the manager should  
4 have a relatively steady input into what he is getting  
5 in the field, and if he does not like it he should have  
6 a right to send it back and say: Here it is, I don't  
7 want it.

8 MADAM CHAIR: Did the problem you are  
9 describing coincide with the transition from government  
10 run nurseries to private nurseries?

11 THE WITNESS: To some degree, I think  
12 that production of spruces, Madam, was always big  
13 problem, because No. 1, we knew soil, we had many  
14 failures in the black spruce or white spruce seed  
15 production, in not only seed but also production of the  
16 nursery stock, and I think that there were many people  
17 who said frequently: Well, I wish I don't have to deal  
18 with that kind of stock, I like to have something else  
19 or better.

20 The production of nursery, lots of it has  
21 been transferred into the greenhouses. That was to my  
22 thinking politically motivated too. I think perhaps  
23 the research input, the whole research which has  
24 been -- perhaps to some degree was wasted, we should  
25 have known better than that, and I think in the long

1 run that this production of planting stock will be  
2 really geared to the demand of forest sites and forest  
3 renewal in the field. We cannot afford just produce  
4 that stock and say: Here, you take it.

5 MR. MARTEL: We heard when we were both  
6 in Timmins, and I guess in Hearst, that the quality of  
7 the stock had improved very significantly and that the  
8 survival was much higher now than it was previously.  
9 And what you are saying is it's just the opposite. So  
10 there hasn't been enough work done in this particular  
11 area?

12 THE WITNESS: Mr. Martel, on many, many  
13 occasions when we were arguing as a forester or tree  
14 producer or utilizer of tree in the field we have clash  
15 with category of forester who said this: I don't know  
16 what good stock is, are you telling me that this is a  
17 stock, I don't know, what is a good quality stock  
18 forest tree planting.

19 We had periods in the government where we  
20 started with two programs, a new program, you heard  
21 that, the artificial or the plastic tubes where the  
22 seed was germinated, and I was told that's the answer  
23 to our forest renewal. It proved after four or five  
24 years that that was not the answer and we have a very  
25 large -- and eventually what was the answer of

1 yesterday was nonsense of tomorrow.

2 Then on top of this many foresters says:

3 Yeah, sir, that is the answer. Matter of fact, the  
4 accurate answer was, and I have seen it in practice in  
5 British Columbia, where they are dropping these tubes  
6 out of the airplanes, they just took millions of these  
7 little things and bomb the whole cut-over areas with  
8 these tubes. I am glad you enjoy this.

9 MR. MARTEL: You should have been in a  
10 shelter when this was happening?

11 THE WITNESS: That's happened. You  
12 should have seen these ravens chasing these tubes -  
13 yeah, birds, eagles and whatever. Multi-purpose  
14 forestry. Now, we allowed that, because one researcher  
15 or all group of researchers said: Look, this is  
16 interesting thing, let's try it, that's maybe going to  
17 work.

18 I know a fellow - and this going to be a  
19 better joke than ever - who said this: How well the  
20 cigarette paper -- he said he going to have batches of  
21 cigarette paper and put little bit of seed and drop it  
22 out of airplane. That didn't materialize because he  
23 found that cigarette paper usually opens up and whole  
24 thing floated in atmosphere here. But that is idea  
25 that's borne by foresters credibly and say: Yes, sir,

1 let's drop the bomb tomorrow.

2 MS. SWENARCHUK: Q. Mr. Marek?

3 A. You don't find it so funny.

4 MS. SWENARCHUK: Mr. Martel, are you  
5 satisfied?

6 MS. CRONK: Don't blame it on him, Ms.  
7 Swenarchuk.

8 MADAM CHAIR: We can move on, Ms.  
9 Swenarchuk. Did you have any other questions?

10 MS. SWENARCHUK: We have several more. I  
11 assume that answers or is part of the answer of whether  
12 he is able to tell the Board what part of his evidence  
13 supports FFT's terms and conditions for silviculture.

14 MADAM CHAIR: Yes, we are satisfied with  
15 that answer.

16 MS. SWENARCHUK: And then second from  
17 last, with regard to proposals for managing aspen  
18 competition, at that time you were not sure if you  
19 understood clearly with regard to small clearcut size  
20 and natural regeneration how that would be helpful for  
21 aspen control. Is that now clear?

22 MADAM CHAIR: Yes, Mr. Marek has gone  
23 over that.

24 MS. SWENARCHUK: Q. The last question  
25 then, Mr. Marek, if you would turn to the executive



1 summary to your witness statement.

2 A. That's for the FFT?

3 Q. Yes, small Roman numeral xii,  
4 paragraph 6, last page. All right.

5 A. You are talking about (xii)?

6 Q. Page (xii), paragraph 6.

7 A. Page (xii), paragraph....

8 Q. 6.

9 A. 6:

10 "Better and more site-specific site  
11 preparation of cut-overs must be  
12 practiced with a strong emphasis on  
13 biological stability."

14 Q. And the Board's question was, would  
15 you please clarify the term biological stability.

16 MADAM CHAIR: I think you've answered  
17 that question, Mr. Marek, with respect to returning it  
18 to primary species.

19 MS. SWENARCHUK: All right. Madam Chair,  
20 I honestly believe I have about two hours of  
21 examination on the Beardmore Society witness statement.  
22 Clearly we are not going to finish that today.

23 What I suggest we could do, if this is  
24 satisfactory to you, is take the time now to at least  
25 mark the exhibits for tomorrow morning and perhaps

1 commence with that at 9:00.

2 MADAM CHAIR: That is fine, Ms.

3 Swenarchuk. I might ask Mr. Pascoe, was Mr. Hanna  
4 intending to start tomorrow morning at 9:00?

5 MR. PASCOE: Yes.

6 MADAM CHAIR: You might get word to him  
7 to come in at 11:00 or --

8 MR. HUFF: That is two hours.

9 MR. PASCOE: He indicated that he was  
10 flexible for the start.

11 MS. SWENARCHUK: Might I be so bold as to  
12 suggest that it might be helpful if he were to hear  
13 some of the direct testimony.

14 MADAM CHAIR: Yes. I think you can pass  
15 on those two comments, Mr. Pascoe.

16 MR. PASCOE: Certainly.

17 MS. SWENARCHUK: I believe there are  
18 three exhibits to be marked, Madam Chair:

19 MADAM CHAIR: The first one will be  
20 Exhibit 1528.

21 MS. SWENARCHUK: That would be the  
22 witness statement prepared for -- 1528, Madam Chair?

23 MADAM CHAIR: That's right.

24 MS. SWENARCHUK: The witness statement  
25 prepared for the Beardmore/Lake Nipigon Watchdog

1 Society entitled: The Lake Nipigon Watershed, Its  
2 Forests and Environs.

3 ---EXHIBIT NO. 1528: Beardmore/Lake Nipigon Watchdog  
4 Society witness statement  
5 entitled: The Lake Nipigon  
6 Watershed, Its Forests and  
7 Environs.

8 MS. SWENARCHUK: And the second would be  
9 the source book for that witness statement.

10 MADAM CHAIR: That will be Exhibit 1529.

11 ---EXHIBIT NO. 1529: Source book for Beardmore/Lake  
12 Nipigon Watchdog Society witness  
13 statement.

14 MS. CRONK: Can I ask to clarify a  
15 question with respect to that, Madam Chair.

16 MADAM CHAIR: Yes, Ms. Cronk.

17 MS. CRONK: I am advised that better than  
18 one third, indeed close to one half of the source book  
19 for the Beardmore statement is a duplicated copy of the  
20 MNR's harvesting witness statement. Does Ms.  
21 Swenarchuk really want that marked as an exhibit as  
22 part --

23 MS. SWENARCHUK: MNR harvesting witness  
24 statement?

25 MS. CRONK: Yes. The two major documents  
in that source book, at least as provided to us, are  
the full text of the witness statement provided by MNR,  
unless our version of the source book is different from

1 other peoples'.

2 MR. FREIDIN: We can understand why you  
3 would want to rely on that.

4 MS. CRONK: I am just inquiring for  
5 clarification because that's what came to us in the  
6 source book and it struck me as perhaps something you  
7 wouldn't want marked, but I am now taking from this  
8 that it's not supposed to be there at all.

9 MS. SWENARCHUK: With apologies to Mr.  
10 Freidin, not at all. We will discuss that later.

11 MS. CRONK: Well, that is helpful. Thank  
12 you.

13 MS. SWENARCHUK: The third document,  
14 Madam Chair, is a letter which my colleagues have  
15 received in the package that I provided them earlier  
16 today, since it was provided on the weekend to Ms.  
17 Cronk, and that is a letter of October 15th, 1990 from  
18 the Watchdog Society signed by Edgar Lavoie and Paul  
19 Odorizzi, to Mr. Quenton Day of the MNR.

20 Four copies, Madam Chair, three copies?

21 MADAM CHAIR: Three copies, please.

22 MS. SWENARCHUK: (handed)

23 MADAM CHAIR: That will be Exhibit 1530.

24 ---EXHIBIT NO. 1530: Copy of letter dated October  
25 15, 1990 from Watchdog Society  
signed by Edgar Lavoie and Paul



1 Odorizzi to Mr. Quenton Day of  
2 MNR.

3 MS. SWENARCHUK: Those are all the  
4 exhibits, Madam Chair.

5 MADAM CHAIR: All right. Did you say  
6 four?

7 MR. MARTEL: Three.

8 MADAM CHAIR: Three. All right, we will  
9 adjourn for today and we will start at nine o'clock  
10 tomorrow, and I think tomorrow afternoon at four  
11 o'clock we have a scoping session scheduled.

12 MS. SWENARCHUK: Yes.

13 MADAM CHAIR: Thank you.

14 ---Whereupon the hearing was adjourned at 3:50 p.m., to  
15 be reconvened on Wednesday, November 7th, 1990,  
commencing at 9:00 a.m.

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